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November 8, 1971

RAILW E

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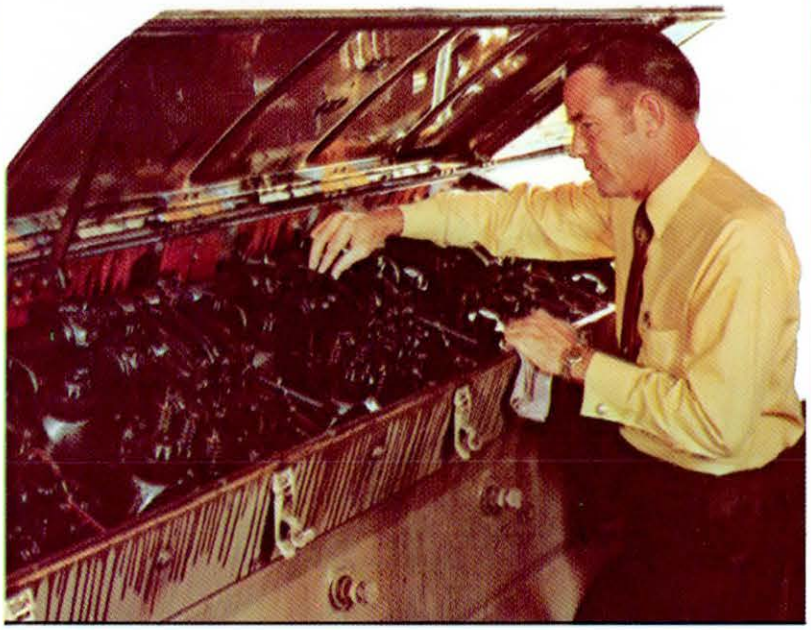
Railroading's new voice in Washington: John Ingram, innovator

LUBRICATION ENGINEERING NEWS

Cities Service research and development program constantly producing new, improved diesel engine lubes

Cities Service Oil Company maintains an aggressive and continuing research and development program at the Cities Service Research Center complex near Princeton, New Jersey. Improved products for railroad applications, both on track and off, are under constant development and testing. Within the past two years alone, superior lubricants have been introduced for a number of different applications. In many cases, these advanced railroad lubes

have taken the place of two or more previous products and thus served to shorten the list of "required" lubricants in customers' inventories. For information on specific products now under development and available for test application programs, drop a line to L. M. Fleming, Transportation, Sales Department, Cities Service Oil Company, Box 300, Tulsa, Oklahoma 74102.



New CITGO RD-836 diesel engine oil extends service life of high horsepower locomotives

The promise of pulling more tonnage with fewer units and a resultant decrease in maintenance costs has remained little more than a promise in many cases. Higher horsepower diesel engines place greater demands on the crankcase oil and on those moving parts whose life depends on effective lubrication. Conventional high dispersant diesel lube oils just couldn't handle the load. Something better had to be developed.

That something better turned out to be CITGO RD-836, specifically formulated to get the maximum usage from each new high horsepower engine. RD-836 withstands more heat for longer periods; neutralizes greater amounts of acid; keeps oil filters and engine surfaces cleaner. Wear is reduced and oil life is significantly extended, resulting in less downtime and lower maintenance costs. Thirteen major railroads are now using CITGO RD-836. In case after case, examination of pistons, rings and cylinders following thousands of hours of operation shows virtually no wear.

Oustanding reserve alkalinity and stability

Among the properties which enhance the performance capabilities of CITGO RD-836 diesel engine oil include excellent reserve alkalinity for extended TBN retention, very fine compatibility with other approved diesel engine oils and unusual stability. **Field tests have indicated this outstanding stability results in a drastic reduction of clutch slippage.**

CITGO RAILROAD LUBRICANTS EXCEED THE NEED.

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CITIES SERVICE COMPANY

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In addition to these qualities, RD-836 also possesses exceptional anti-rust and anti-foam properties provided by special components in the additive package. The superior grade medium VI base stocks contribute exceptional oxidation stability and anti-wear protection along with good silver lubricity.

Dispersant, detergent keep engine parts clean, filters free-flowing.

An ashless dispersant and a detergent additive are key ingredients in CITGO RD-836 diesel engine oil. Designed to provide both longer service intervals and extended filter life, its high despersancy permits the oil to flow readily through filter elements with a minimum of filter and oil

cooler plugging. This is particularly important in the lubrication of engines equipped with by-pass valves, where particles in the unfiltered oil could otherwise settle out and cause abrasive damage to bearings. **All these superior characteristics have helped CITGO RD-836 become one of the few lubricants to win a place on General Electric's "Superior Class II" rating list.**

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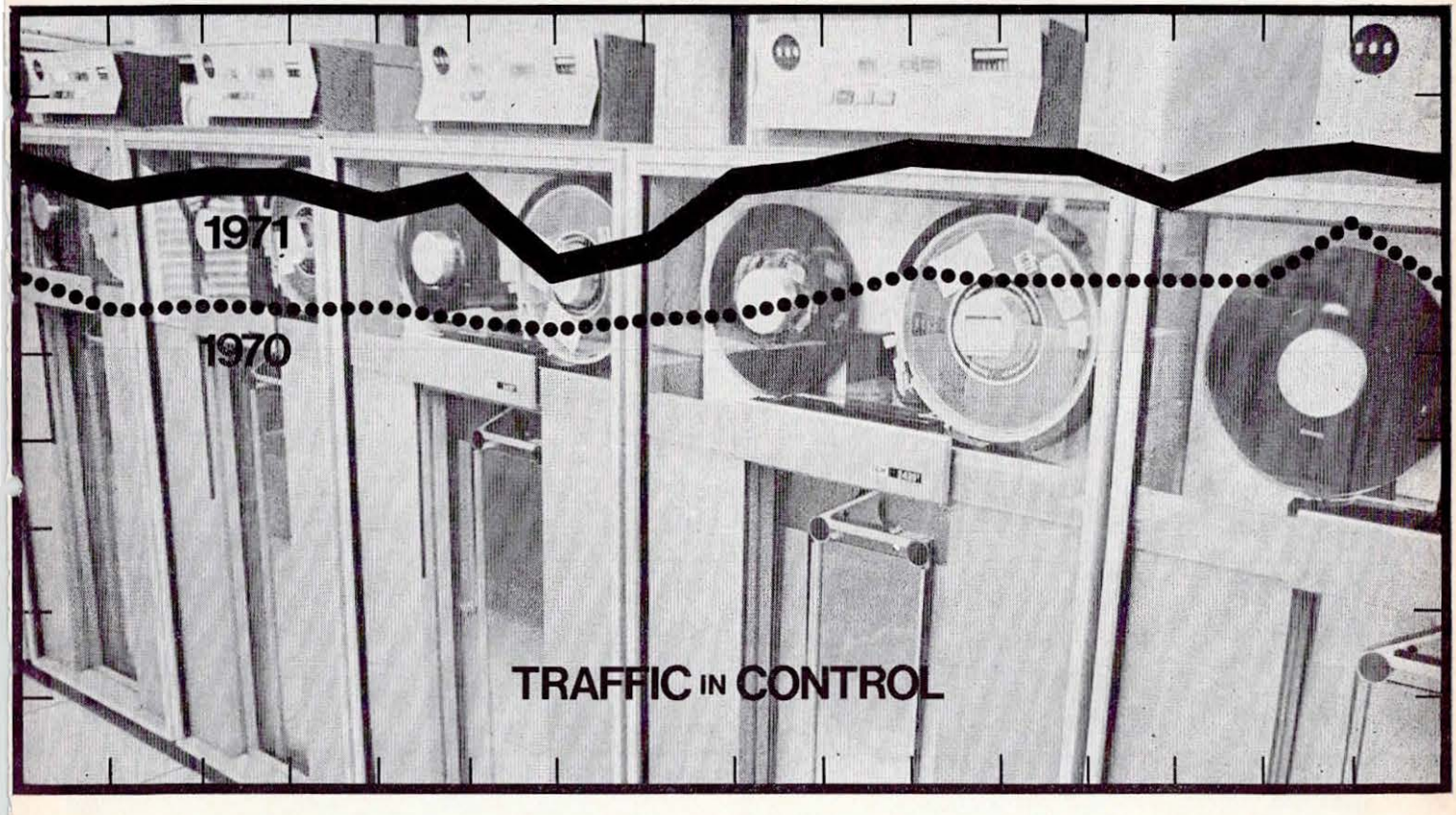
KEYPOINT SERVICE QUALITY CONTROL PROGRAM



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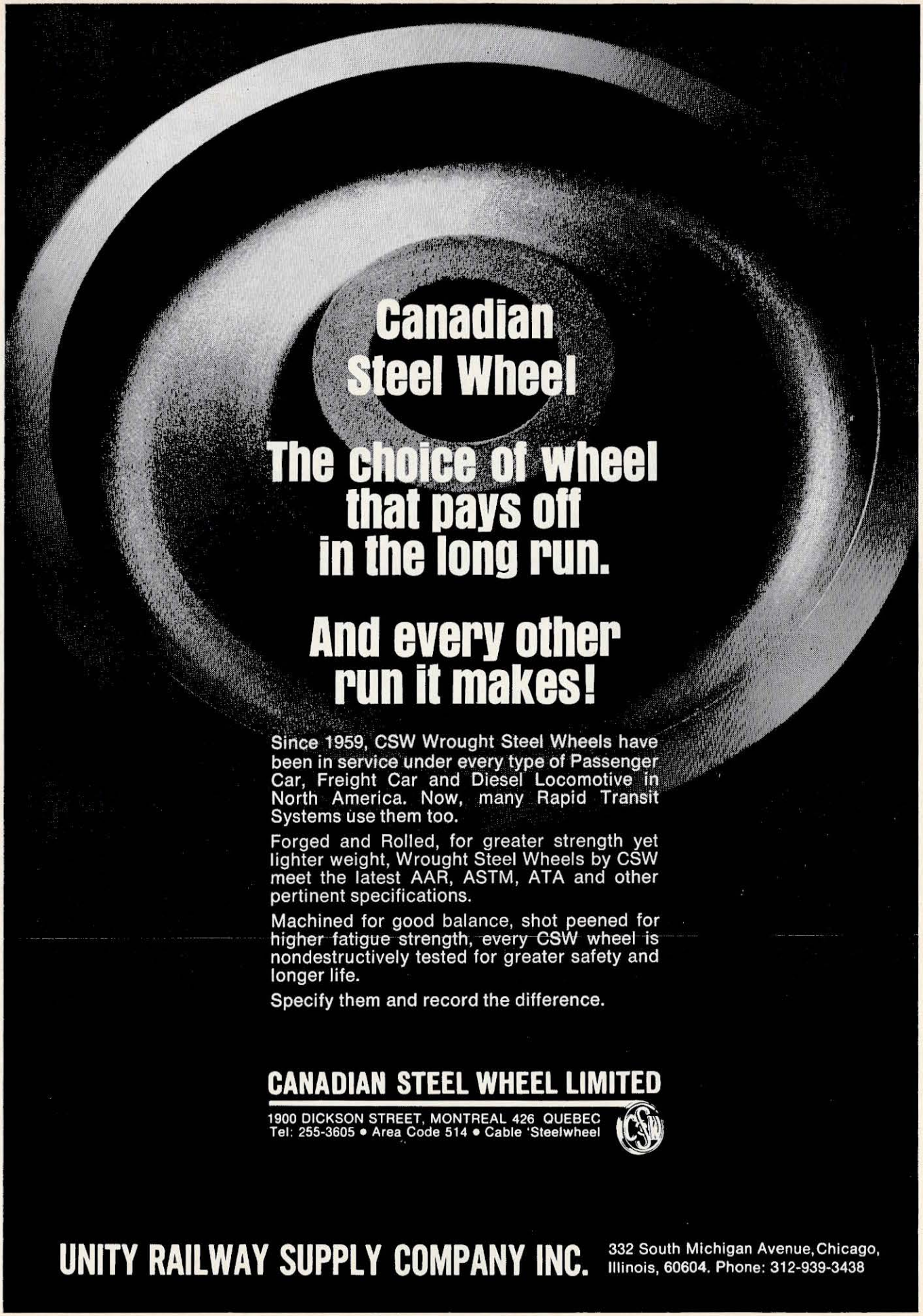
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RAILWAY AGE

November 8, 1971 • Vol. 171 No. 9

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Railway Age, established in 1856, is indexed by the Business Periodicals Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published semi-monthly by the Simmons-Boardman Publishing Corporation, 508 Birch St., Bristol, Conn. 06010.
Railroad employees' subscription rate, U.S. possessions, Canada and Mexico, $6 one year, $9 two years, all others $15 for one year, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $10 a year; in the eastern hemisphere, $15 a year. Single copies 60¢, except special issues.
Address all subscriptions, change of address and correspondence concerning them to Subscription Dept., Railway Age, P.O. Box 530, Bristol, Conn. 06010.
Change of address should reach us three weeks in advance of next issue date. Send old address with new enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Member of ABC Audited Paid Circulation RPI Railway Progress Institute

Circulation Dept.: John Rogers Director of Circulation, 350 Broadway, New York, N.Y. 10013. POSTMASTER—SEND FORM 3579 TO P.O. BOX 530, BRISTOL, CONN. 06010.

Printed at the Hughes Printing Co., 34 North Crystal St., East Stroudsburg, Pa. 18301. Second-class postage paid at Bristol, Conn., and at additional mailing offices.

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Inside

LUTHER MILLER

DR. INGRAM PRESCRIBES

Burlington Northern Chairman Louis W. Menk recently told the Chicago Rotary Club: "From the point of view of the American taxpayer, who would have to foot the bills for nationalization [of railroads], suggesting government takeover is akin to suggesting that double pneumonia is less serious than a head cold."

John Ingram, the new Federal Railroad Administrator and the subject of this week's cover story (p. 20), agrees that it is naive to consider nationalization as the solution to anything. Ingram is clearly unwilling to administer poison to an ailing patient.

He does think, however, that strong medicine is needed to make the railroads right again—and he feels that the Federal government can help stir it up. You certainly don't get the feeling, reading what Administrator Ingram told Senior Editor Gus Welty at their recent recording session, that Ingram has gone to Washington to officiate at a funeral.

A marketing man—and perhaps the best marketing man this industry has known in recent years—Ingram has taken a marketing approach to his new job. "We need to know where railroads can do the biggest and the best job," he says. "I think we're going to find more and more markets for rail transportation."

We think Ingram is just the man to help government help railroads to capitalize on these markets—given the assistance of such industry leaders as the aforementioned Mr. Menk (who, incidentally has already done one very good turn for the FRA. Ingram tells of Menk's recent visit to the DOT research center at Cambridge, Mass., formerly a NASA facility and still staffed mostly by moon men. "Frankly, some of them thought railroads were just something of little or no interest." Then Menk came—and now, says Ingram, "we have a bunch of railfans at the lab").

BACK IN THE NEWS: PASSENGER TRAINS

In recent years most of the passenger-equipment stories which we have published have related to urban transportation—two notable exceptions being the development of the TurboTrains and the Metroliners. It is a distinct and all-too-rare pleasure, in this issue, to report that interest in the intercity passenger train is now heating up. Canada has high hopes that its new LRC trains (p. 29) will capture a large share of the world market for new high-speed passenger equipment. Britain has equally high hopes for its APT (p. 30), in which 40 countries, British Rail Chairman Richard Marsh told Railway Age, have shown interest. And United Aircraft—which unlike the others already has a product, and is working hard to improve it—is still very much in the picture.

We used to have whole issues devoted to passenger equipment. Maybe one day, soon. . . .

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RAILWAY AGE

November 8, 1971

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COVER

Railway Age Art Director Maurice Mates photographed FRA Administrator John Ingram with DOT Secretary John A. Volpe in Washington a few minutes after Ingram was sworn into office on Oct. 13.

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Short and Significant

AAR AND RPI WILL NOT EXHIBIT AT TRANSPO

The Association of American Railroads and the Railway Progress Institute have decided not to mount an exhibit for Transpo '72, the International Transportation Exposition which the Department of Transportation will sponsor at Dulles International Airport, Washington, next May 27-June 4. A proposed joint exhibit would have cost several hundred thousand dollars—and the trade associations felt they could not justify the expenditure for what many observers feel will be essentially an air show (RA, Oct. 11, p. 22).

NEW YORK REJECTS TRANSPORTATION BONDS

Despite the urgent pleas of Gov. Nelson Rockefeller and Mayor John Lindsay, New York voters on Nov. 2 resoundingly rejected a proposed $2.5-billion transportation bond issue. More than half of the proceeds were to have been earmarked for mass transportation—but critics pointed out that around $1 billion in mass transit funds from a previous bond issue was still unspent. (*For editorial comment, see page 58.*)

MECHANICAL DIVISION MOVE SET JAN. 1

The AAR has confirmed reports (RA, Oct. 11, p. 8) that the Mechanical Division will be moved from Chicago to Washington effective Jan. 1, 1972. "The move is being made to fill the need for closer day-to-day contact with Federal agencies and other AAR divisions," said the association.

AMSTED TO SPEND $10 MILLION IN '72

Amsted Industries announced that on the basis of present plans, expenditures for plant additions in 1972, excluding acquisitions, will be about $10 million. The largest expenditure, said Joseph B. Lanterman, chairman, and Goff Smith, president, in a joint statement will be for a major expansion of the railroad steel wheel plant in Transcona, Man., Can.

ANOTHER ACQUISITION FOR ROHR

Soladyne International, Inc., San Diego-based company involved in development of advanced microwave communications systems, is the latest acquisition for Rohr Corp. Soladyne will operate as a wholly-owned subsidiary and, Rohr says, will "support the company's growing activities in ground-transportation systems."

FOR ARE: AWARDS, NEW OFFICERS

Penn Central and PC Editor Joseph Shallit won the top award for excellence in employee publications in the 1971 competition of the Association of Railroad Editors. Other awards went to Burlington Northern, Canadian National, Bangor & Aroostook, Canadian Pacific and Chesapeake & Ohio/Baltimore & Ohio. New president of ARE is Santa Fe's Sheldon Butler, succeeding Edward J. Wojtas of Rock Island.

AMTRAK RULES ON PASSES

Amtrak will allow full-time railroad employees to travel free in its cars operating over lines of the employee's railroad. Half-fare privileges on foreign lines remain in effect. The new policy does not apply to employees hired after Amtrak's May 1, 1971 startup date, retired employees, or employee dependents.

SOUTHERN, NORFOLK SOUTHERN EYE UNION

The 10,200-mile Southern and the 624-mile Norfolk Southern are conducting "purely exploratory" talks that could lead to acquisition of the latter by the former. If the discussions come to fruition, the Southern would gain direct access to Norfolk, Va. Norfolk Southern, which operates in Virginia and North Carolina, is a comparatively prosperous carrier which had net income of $413,000 in this years' first six months.

MAINE CENTRAL'S FOSTER HEADS ACCOUNTANTS

Horace N. Foster, vice president, accounting and finance, Maine Central, was elected chairman of the AAR's Accounting Division at the division's annual meeting Oct. 27 at Boca Raton, Fla. He succeeds William N. Ernzen, vice president and controller of Burlington Northern. Principal speakers at the meeting were Prime F. Osborn, president of Seaboard Coast Line; Robert W. Downing, president of Burlington Northern; and ICC Chairman George M. Stafford.

UNIT TRAIN FOR PULP, PAPER INDUSTRY

A unit train which makes two 520-mile, 30-hour round trips weekly over the Penn Central between Hammermill Paper facilities at Erie and Lock Haven, Pa., serves also four intermediate points where hardwood chips and pulpwood are loaded. Hammermill acquired 136 high-capacity gondolas for the service which involves loaded movements in both directions. According to Donald S. Leslie, Jr., executive vice president of Hammermill, the unit train venture should result in greatly improved rail service and should put his company in a better position to regulate the inflow of its basic raw material.

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GTE Lenkurt's 46V coaxial cable transmission system is designed for long-haul, high-density communications systems and is also an economical system for applications such as entrance links and metropolitan bypass. The repeaters are designed for an average life of 50 years, making the 46V the most reliable system you can buy.

There's a lot more to know about the 46V. Three bandwidths are available, providing from 300 up to 2700 voice channels depending on the multiplex allocations used. The highest capacity system can transmit a color television channel and 1200 voice channels simultaneously. The 46V uses 0.174″ coaxial tubes for medium length systems and 0.375″ coaxial tubes for longer systems. The system also meets CCITT specifications. And the average noise on a typical system is 1.5 pWp/km, or less.

Designed by Siemens AG of Munich, Germany, and proven in installations throughout the world, the 46V has a unique repeater that compensates for the variations in cable attenuation as a function of cable temperature. These temperature-regulated repeaters provide a more economical repeatered-line with better data handling characteristics than possible if only pilot-regulated and fixed-gain repeaters are used.

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If you'd like to know more about the 46V, and the 46A3 Multiplex, just phone: Atlanta (404) 261-8282/ Chicago (312) 263-1321 / Dallas (214) 363-0286/Falls Church (703) 533-3344 / San Carlos (415) 591-8461. Or write: GTE Lenkurt Incorporated, Dept. C720, 1105 County Road, San Carlos, CA 94070.

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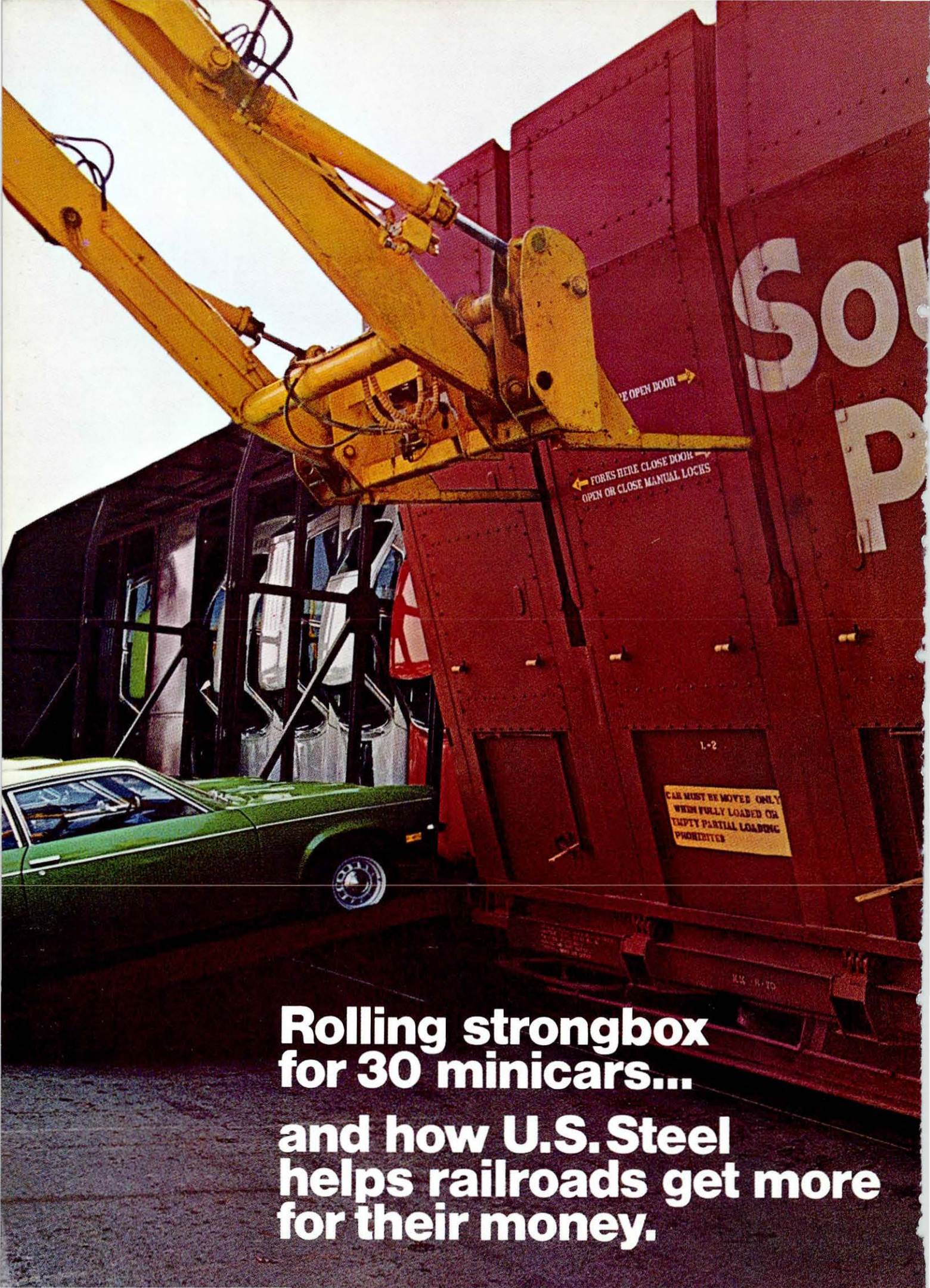

Rolling strongbox for 30 minicars...

and how U.S. Steel helps railroads get more for their money.

This giant freight car, Vert-a-Pac, hauls 30 little autos in scarcely more space than the usual tri-level rack car needs for 12 of standard size.

Southern Pacific and a major auto maker developed the 18-foot-high car to carry the 14-foot-long autos in a revolutionary position: nose-down on walls that also serve as loading ramps.

To cut the weight of this rolling strongbox (Vert-a-Pac is virtually vandal-proof and dirt-proof) the designers chose USS COR-TEN A Steel. This high-strength, low-alloy steel is 40 per cent stronger than carbon steel, has 5 to 8 times the resistance to atmospheric corrosion and gives twice the paint life.

It's used in the built-up center sill of the basic flat car (prime contractor: ACF Industries) and in the above-deck auto housing (subcontractor: St. Louis Car Division, General Steel Industries, Inc.). We're supplying steel—and good advice—on a lot of other projects important to the railroads: cars, rails, bridges, buildings.

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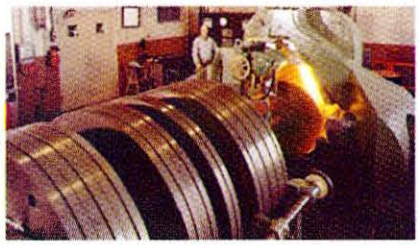

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RAILWAY AGE
NEWS

FRA modifies track safety standards

Costly, but not nearly so costly as the original standards: That is what railway engineering officers are saying about the Track Safety Standards issued by the Federal Railroad Administration and published in the Federal Register of Oct. 20. The comparison is with the proposed standards as published in the Federal Register of June 23, 1971. (In developing the standards the FRA was acting under authority provided under the Federal Railroad Safety Act of 1970, which gives the Department of Transportation board regulatory powers over all areas of railroad safety.)

Key changes were made in several areas—including the time limits for conformity with the standards. A task force of the Engineering Division, Association of American Railroads, had estimated that railroads would have to spend about $2.2 billion, over and above normal expenditures, if they were required to bring their tracks up to the requirements established by the standards as originally published. An estimate made by the same task force of the additional cost of the revised standards was not available at press time, but industry sources say that it will be substantially less. In fact, the chief engineer of one large, well-maintained road has stated that the modified standards will require no additional expenditures on his road.

● **"Numerous significant changes."** When the proposed standards were published in June, the FRA invited interested parties to submit comments regarding them. Among the parties heard from was the AAR (RA, Sept. 13, p. 29) which took strong exception to many of the proposed specifications. These exceptions, or at least many of them, were taken seriously by the FRA in developing the final version. In a preamble to the revised standards the FRA said "numerous significant changes" had been made in the standards as orignally proposed. These changes are made, it said, after considering the comments that were submitted following publication of the proposed standards.

Explaining its action, the FRA said: "Many of these changes reflect the FRA's conclusion, after carefully reviewing the comments, that some of the proposed initial track safety standards, particularly with respect to the lower classes of track, were in fact preferred or recommended practices from an economic or engineering standpoint rather than minimum requirements for safety."

● **They're minimum standards.** In announcing the new standards, Secretary of Transportation John A. Volpe said they were minimum standards and emphasized that they were "initial" specifications. He added: "As we develop greater knowledge from our safety research program and experience in actual operation, they may be upgraded, relaxed or modified when in the public interest and consistent with safety." The FRA said the initial standards "issued in this proceeding . . . will be continually reviewed and revised in light of technical innovation, the results of the FRA research and development program, and experience under these standards."

"Minimum requirements for safety"—as opposed to "preferred practices"—have been adopted.

● **Important revisions.** Some of the more important modifications made in the standards included:

—An increase of one-fourth-of-an-inch in maximum gauge limit for curved track for most classes of track and deletion of limitations of gauge for frogs and track crossings.

—Increases in allowable maximum deviations in alignment "because the proposed maxima were more restrictive than required for safety."

—Increases in all allowable maximum deviations in track surface for several classes of track and several maxima in other classes.

—Deletion of requirements prescribing specifications for ballast sections where crushed rock or crushed slag are used.

—Extensive revision of requirements for crossties. The requirements are now presented in a "more concise, easier to understand" form.

—Adjustment of requirements covering mismatch of rail ends "because comments convinced FRA that the numbers proposed were more restrictive than necessary for safety."

—Modification of requirements for rail joints, which have the effect of making them less restrictive.

● **More time allowed.** The impact of the FRA standards has also been softened in another major respect—the time allowed in which to bring tracks into conformity with the standards. The preamble to the revised standards explains it this way: " . . . FRA has decided that the railroad industry will need additional time to bring its tracks into compliance with a number of requirements . . . pertaining to track geometry and crossties. The number of ties required to be replaced to bring all tracks into compliance with these standards exceeds the total number of ties now produced annually. The manufacturers will require some time to gear up their production to meet the increased demand generated by these standards and, consequently, railroads will encounter delays in securing new ties."

Because of these considerations, and keeping in mind the fact that the track is generally given a "reworking" in conjunction with major tie-renewal programs, the standards have been modified to provide that requirements pertaining to track geometry (alignment, gauge, surface) and crossties are to become effective Oct. 16, 1973, with respect to track now in existence (instead of Oct. 16, 1972, as provided in the proposed standards).

In all other respects—drainage, vegetation, defective rails, rail-end mismatch, rail-end batter, rail joints, and so forth—the standards are to become effective Oct. 16, 1972, for track constructed or under construction before Oct. 15, 1971. For new track, all the standards become effective Dec. 1, 1971.

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Rail Scanner

- Set 13'-6" back from nearest rail
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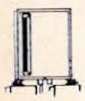
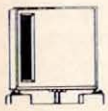


Road Scanner (Self-enclosed)

- Set 10'-6" back from nearest rail
- Set back 3'-0" from roadway with 6 foot depth of field
- Can be placed between tracks of 22 foot centers



Yard Scanner (Self-enclosed)

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Circle 5 on coupon page 47

Nine-months' earnings show strength

The coal and dock strikes have cut sharply into carloadings in recent weeks; they are bound to have a dampening effect on the railroad industry's earnings performance for calendar 1971. But reports now coming in covering this year's first nine months are almost uniformly good.

For the nation's biggest railroad, "good" simply means less bad than last year: Penn Central cut its nine-months' loss from $233,691,065 in 1970 to $195,537,607 this year.

For other railroads, thanks to a combination of stringent cost control and higher rates, the pre-strike year was good to excellent.

A random sampling:

—Western Pacific Industries reported third-quarter earnings of $2,232,000, compared with a loss of $8,387,000 in the 1970 quarter; and nine-months earnings of $3,024,000, against a restated loss of $11,806,000 (including extraordinary charges amounting to $5,083,000) in the corresponding 1970 period.

—Southern had a third-quarter net income of $15.1 million, down slightly from last year's $15.2 million. But Southern's nine-months profit was $51.9 million, compared with $42.9 million

Healthy roads get healthier; the sick show improvement

a year ago, and set a new record for the period. (Southern also reported that its capital expenditures for 1971 are now estimated at $130 million, up from $128.1 million in 1970 and $124.8 million in 1969.)

—Pittsburgh & Lake Erie posted a third-quarter net of $1,429,089, down from last year's $2,718,451; and nine-months earnings of $7,216,302, compared with $7,206,793 in 1970.

—Frisco's third-quarter earnings rose to $2,746,662 from $2,737,150 (restated) in 1970. Nine-months earnings were $10,080,994, a record high, compared with $9,530,364 a year ago.

—Norfolk & Western reported third-quarter income of $21 million, up from the 1970 quarter's $16.6 million; and nine months earnings totaling $66.4 million, against $50.4 million last year. Consolidated third quarter net income for the N&W system, including Dereco, Inc., and its wholly-owned subsidiaries, Erie Lackawanna and Delaware & Hudson, rose to $19.2 million from $14.3 million a year ago; and nine months system earnings were $67.3 million, compared with $45.1 million in the 1970 period.

—Southern Pacific had consolidated earnings of $26.1 million in this year's third quarter, compared with $25 million last year; and nine months earnings of $92.6 million, against $84.1 million a year ago.

—Soo Line's third-quarter earnings totaled $1,837,419 this year, compared with $1,294,164 a year ago. Nine months earnings totaled $5,372,019, against $4,010,455 in 1970.

—Union Pacific Corp. increased its earnings to $59.8 million in the first nine months of 1971 from $55.4 million in the comparable 1970 period. In the third-quarter—marked by an 18-day strike by the United Transportation Union and the longshoremen's West Coast strike—the corporation had net income of $19.1 million, against $21.8 million last year.

—Chesapeake & Ohio/Baltimore & Ohio, hard hit by wildcat coal miners' walkouts in July, still managed to report a $30-million profit for the first nine months, compared with $35 million last year. Third-quarter earnings dropped to $2 million from 1970's $12 million.

—For the nine months, Santa Fe Industries reported net income of $43.4 million, compared with $32.9 million in 1970. Santa Fe's third-quarter net was $16.9 million, up from $9.2 million a year ago.

Chicago & Eastern Illinois earned $1,590,658 in the first nine months, up from $117,803 in the corresponding 1970 period; third quarter earnings were $630,241, compared with $329,994 last year.

—Seaboard Coast Line Industries reported net income of $37,474,000 for the first nine months, compared with $19,617,000 for the 1970 period.

—Norfolk Southern had a nine-months net of $558,515, compared with $214,478 in 1970. Norfolk Southern's third-quarter net income was $145,675, against $28,850 for the same period last year.

The Milwaukee Road and the Rock Island were among those roads reporting losses—but smaller losses than a year ago.

For the first nine months of this year, Milwaukee's net loss was $5,217,738, a substantial improvement from 1970's deficit of $12,856,491 for the corresponding period. For the third quarter, Milwaukee had a net loss of $1,606,346, compared with a loss of $3,029,739 last year.

Rock Island Lines reported a nine-months loss of $8,458,499, compared with a loss of $13,633,870 in the 1970 period. Rock Island's third-quarter loss this year was $555,691, against a $5,508,883 deficit in 1970.

Dempsey chosen as chairman of NRLC

William H. Dempsey, Jr., a young and highly respected lawyer, has been named chairman of the National Railway Labor Conference, effective Jan. 1. He succeeds J. P. Hiltz, Jr., who is retiring.

Dempsey, 40, brings impressive credentials to the job. He was graduated from Notre Dame in 1952, received his LL. B. degree from Yale in 1955, clerked for U.S. Court of Appeals Judge Charles Fahey and later served as chief law clerk to Chief Justice Earl Warren. Though he has not been a "bargainer" in the traditional sense of the word in rail management/union dealings, with the law firm of Shea & Gardner he has been a key man in presentation of rail labor cases before the courts and various boards.

Former NRLC chief Doc Wolfe dies

James E. Wolfe, first chairman of the National Railway Labor Conference, died Oct. 30 in an Oak Park, Ill., hospital. He was 69.

Doc Wolfe's railroad career fell just a year short of spanning a half century. He began as a machinist's helper on the Burlington in 1918, rose to vice president-labor relations at CB&Q and was chosen as the first chairman of the National Railway Labor Conference when NRLC came into being Jan. 1, 1963. He retired in 1967.

Wolfe's biography reads like a history of railroad labor relations from about 1950 on and especially during the turbulent 60's. He served as a member of the Presidential Railroad Commission and was one of rail management's two representatives on Arbitration Board 282 in the work-rules case.

Trailmobile dedicates 8,000-unit plant

Trailmobile, one of the nation's leading producers of truck trailers and containers, officially dedicated its fifth manufacturing plant Oct. 28, in the east-central Illinois prairie community of Charleston. Less than 200 miles from Chicago and 125 miles from St. Louis, the 307,900-square-foot facility will serve a 12-state Middle West market. When full production is reached, its annual volume will be 8,000 units,

Lines on Labor

GUS WELTY

SENIORITY IN DANGER?

Another rail labor case may eventually find its way to the U.S. Supreme Court—but this time, for a change, management and the unions will likely be shoulder-to-shoulder, rather than nose-to-nose. And the courtroom foe will be the United States of America, in its role as guardian of minority rights. The dispute has to do with alleged discrimination in transfer and promotion practices—and a final decision adverse to the Jacksonville Terminal and the labor organizations could have a battering-ram effect on the traditional railroad seniority system, as outlined in collective-bargaining agreements and as practiced for decades.

FOR BLACKS, A COURT WANTS "TERMINAL SENIORITY"

Thus far, the case has been through a U.S. District Court (where the government lost, after a lengthy trial) and the Court of Appeals for the Fifth Circuit (which, by a 2-1 vote, reversed a good part of the District Court's findings). An appeal for rehearing has been filed.

In effect, the appellate-court majority agreed with the lower court that blacks had not been discriminated against in initial job assignments. But it took a different view with regard to transfers and promotions. And the thrust of its opinion is that (1) blacks should be permitted to bid on vacancies by using their total company seniority, while (2) whites would continue to be governed by bargaining-agreement provisions which generally specify craft/class seniority.

Understandably, the carrier and the labor organizations are alarmed. It might be safe to say that nothing is quite so sacred to a railroad employee as his seniority date—and under the situation which the appellate court would create, an inexperienced black could cross over and outbid an experienced craftsman who happened to have less total time with the company. The Terminal would not be required to keep unqualified personnel in a job—but it would be required to maintain a black employee's total seniority if the individual successfully bid into a new classification and then failed on the job itself.

A QUESTION OF DISCRIMINATION—AND PREFERENCE

In its bid for a rehearing, Jacksonville Terminal raises a number of points—including observations relating to lack of proof of discrimination and to the reverse twist of the court majority's logic in creating "a fictitious 'affected class' with superseniority rights." Carrier lawyers also point to Congressional intent, the language of the 1964 Civil Rights Act and Supreme Court precedent as all opposing the granting of preferential treatment.

In his dissent, Circuit Judge J. P. Coleman put it another way. Calling attention to the majority's finding of discrimination in promotions, he asked: "Are we going to eliminate that discrimination by destroying the seniority of those who for years, under contract, in good faith worked to earn it? That, to me, is substituting one form of discrimination for another."

Barring agreement among the parties—possible but probably not likely—this one is almost a sure bet to go all the way to the top court in the land. And the stakes are not small.

Ore unit-trains are added by UP

The Union Pacific has increased its operating track mileage slightly less than one mile to accommodate new unit ore-train service from Cima, Cal., to Los Angeles. It is expected that as many as 100 5,000-ton shipments a year will be made to the Port of Los Angeles bulk-loading facility.

Built to take care of the new service, a connection has been made in the Wilmington district to join Union Pacific's San Pedro branch with Southern Pacific trackage leading to Los Angeles harbor.

The ore, from the Standard Slag Company's mine at Beck Springs, about 20 miles southeast of Tecopa, Cal., is mostly magnetite with some hematite and has been sold to the Tonan Trading Company, Tokyo, agents for Japanese steel mills.

Trucked 49 miles from the mine in northeast San Bernardino County to Cima, the ore is loaded into a 50-car unit train. A 15-hour, 280-mile rail haul brings it to the bulk loader at berth 49 for transfer to the holds of ore-carrying vessels.

At Cima, 4,200-ft. summit of UP's Los Angeles-Las Vegas line, nearly 4,000 feet of track have been installed for the operation. Two 27-car loading tracks serve the stockpiled ore, which is relayed by front-loader vehicles to the waiting train.

The railroad has ordered 55 new ore cars for the service at a cost of about $900,000 and has assigned four 3,600-hp locomotive units to handle the train. Until delivery of the new cars at year's end, the ore is being hauled in gondola cars.

The new train, known as the "CUW" (Cima unit west), operates on a 72-hour turnaround cycle which includes 8 hours for loading, 24 hours for unloading, and four hours for servicing at UP's yard at the City of Commerce.

LI centralizes power control

Long Island Railroad will soon control its entire electrification—119 route miles and about 300 miles of track—from a new centralized facility in its Jamaica, N.Y., headquarters.

Before the new supervisory system was installed, substations along the line had to be individually manned. With the new power-control room fully operational, this dispersed control will no longer be necessary as all substations will be worked remotely from Jamaica.

Automation already covers 20 substations. By year end the power control room will operate all 83, 45 of which are brand new. This modernization of the power distribution system for the road's direct-current third rail has involved replacement of many aging rotary converters with new solid-state rectifiers.

A step-up of voltage in the system is soon planned, making possible higher acceleration for trains. Currently, power for the system is about 25 million kilowatts, up 5 million from a year ago. It will go still higher. New substations are going in as electrification is extended eastward on two LI routes. New York State's Metropolitan Transportation Authority, which operates the Long Island, is extending electrification as part of its program to upgrade commuter service.

The $1.2-million control facility is installed in a 26- by 16-foot room. Any of 5,700 malfunctions along the system is quickly indicated by lights. Load dispatchers and power directors, by pushing buttons, can shut off, transfer, or reinstate power along any segment of the line. They also notify repair crews and pinpoint the location of the fault.

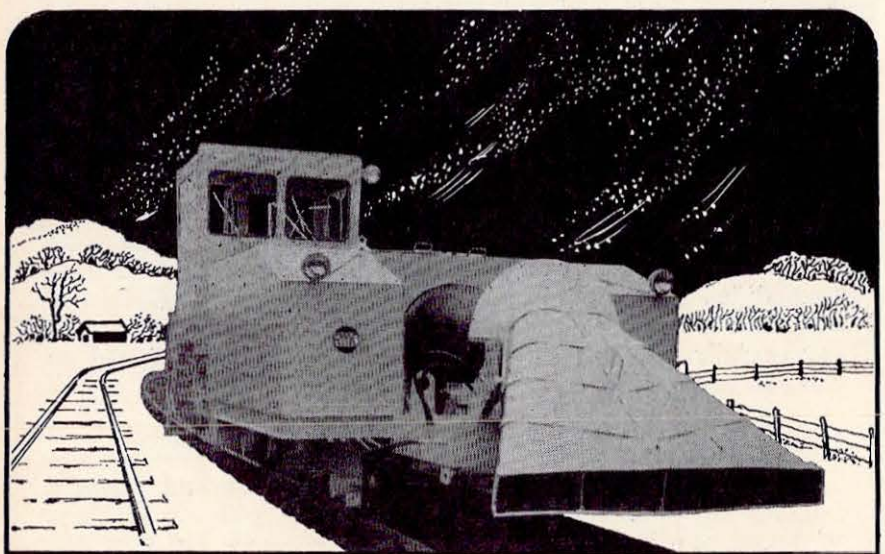
The original proposal for the display board would have involved one almost twice as long as the 17 feet occupied by the unit finally installed. D. W. Aiken, assistant superintendent, signals and electric traction, redesigned the system to consolidate and simplify the information required in the power-control center.

Transit subcontract goes to Garrett

Boeing's Vertol Division is the prime contractor (systems manager) to provide two "state-of-the-art" rapid-transit cars for UMTA. St. Louis Car will build the cars under contract to Vertol —and now the AiResearch Manufacturing Co. division of Garrett Corp. has been chosen to provide the propulsion systems.

According to St. Louis Car, the systems will have solid-state chopper controls and will be designed to operate at speeds up to 80 mph with acceleration at a rate of 3 mph/second. Delivery of the two cars is scheduled for September 1972.

After initial tests at the High Speed Ground Test Center at Pueblo, Colo., the cars are to be tested on existing transit systems.



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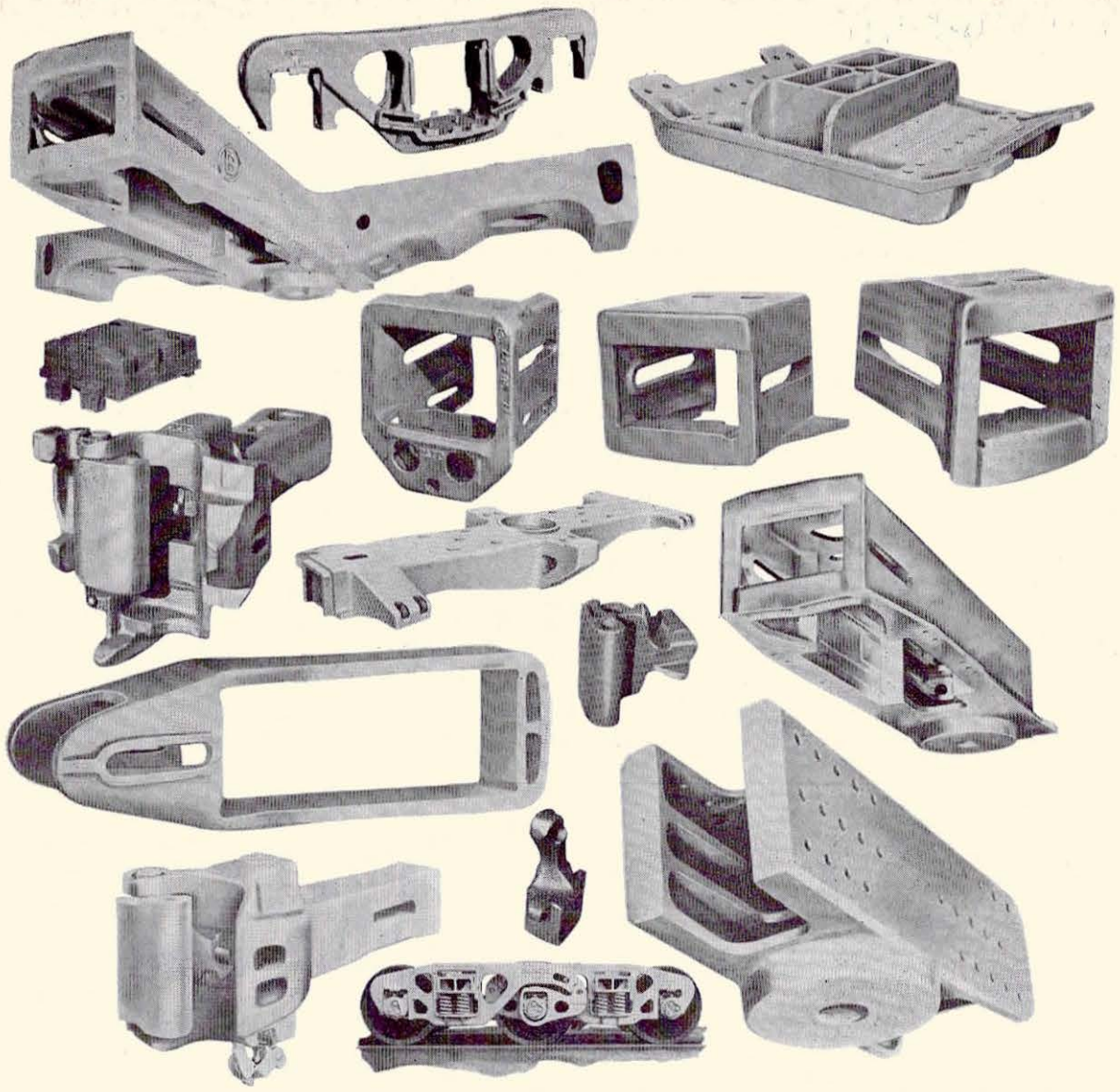

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John Ingram:

"Railroads have nowhere to go but

By Gus Welty, Senior Editor

When you think of Federal Railroad Administrator John Ingram, you don't think first of "John Ingram, administrator." You think first of "John Ingram, innovator."

That's good, because ideas ought to be the stock-in-trade of FRA. And, while some men are good with ideas, some are also good with ideas-plus-execution. Ingram is an ideas-plus-execution man. His thinking is positive: "Railroads have nowhere to go but up." His goal is clear: "FRA can help." And already, less than a month after his swearing-in, Ingram is coming up with enough ideas to keep FRA and the railroad industry and a good part of official Washington thinking—and acting—for some little time.

What is Ingram talking about? In even a single conversation, you might hear about:

—A planned reorganization within FRA to centralize technological research and to put a lot more emphasis on economic research coordinated with technological research.

—The naivete of those who talk about nationalizing Penn Central (or any other large segment of the industry).

—The need for revision in present bankruptcy law to put it in line with today's requirements and not the much-different requirements of the 1930s.

—Ways in which railroad-aid programs might be structured to get maximum benefits.

—How railroads have improved their "image" position, and how they might do a still better job.

—How an existing organization of "builders" might perform a genuine national service in helping to solve the nation's rail/highway grade-crossing-elimination problem.

—Why containerization, that "good future" manifestation of intermodality, really should have a good future, and soon.

● **Change at FRA.** Take first things first: What about reorganization of FRA?

Ingram wants to centralize technological research and "to make sure research is being carried on by people who understand industry problems as well as by people with a visionary bent. We need both, and we need balance." Equally important, he is concerned that at FRA "there is a signal lack of economic research—the kind of research that gets into the economic demand for the industry's service, that measures it and that tries to relate the quantity of service available to the demand."

What Ingram plans is creation of a separate economic research group "to try to give the technological planners a base against which to do their planning and their research—so they're not out researching some device for which there's really no demand. Technological research should be aimed at the areas where it can make the greatest contribution to the nation's transportation effort. We want to give the researchers the ability to put the bucks where they count most."

FRA's economic research may be far-reaching. As Ingram puts it, "We're talking supply and demand, and as you know, transportation demand does not have a modal emblem attached to it. The question is, 'How can you satisfy increased public transportation demand and satisfy it well, using railroads as a prime mover?' In getting at this question, we're going to have to explore such areas as container operation and improved intermodality. We need to know where railroads can do the biggest and the best job, and where other forms of transportation can perhaps make a better contribution. In going over this ground, I think we're going to find more and more markets for rail transportation, rather than the other way around. Railroads, I'm convinced, have nowhere to go but up."

● **"Tremendous interest."** Ambitious programs like this cost money—and Ingram believes FRA can get what is needed: "There's tremendous interest on the part of the Administration and Congress to explore these areas—because in effect we're reducing, not increasing, the cost of government. To the extent that the Federal government puts its money where it will produce the most efficient transportation supply, it has reduced its costs of operating, it has increased the benefits to the people who use the system—and, of course, it can even improve its income tax collections. Put it this way: I would not promote an increase in the cost of running FRA that I did not think would be more than regained in the long run in other sections of the economy."

Ingram is no less outspoken in his view of the industry's most visible trouble-spot, Penn Central. First, he declares, "I think anyone who believes the Federal government is going to nationalize Penn Central is naive."

Three studies of PC nationalization have been undertaken in government. But, says Ingram, "I can't find anybody in Washington who's willing to spend the money. Remember, nationalization doesn't solve any of Penn Central's problems. It merely transfers ownership from the people who now own the securities to the Federal government. And unless someone's going to amend the Constitution—which I doubt—then the government would have to pay fair market value for that rather large railroad. Of course, this begs the question of what the government would do with PC after it got it. I don't think the government could afford to acquire PC, nor do I think there's enough money in the Federal treasury to run it under Federal auspices. I would oppose either one—acquisition and/or operation."

● **Change in the law.** At the same time, the new Administrator says, government action in another area might be more rational: "We probably need revision in the bankruptcy law. Section 77 was set up in the 1930s, when the major problem was the inability of a number of railroads to meet oncoming bond maturities. That's not the problem today. Today, we're dealing with railroads that don't have large maturities coming due—but that do have a negative cash flow, even after eliminating tax payments and bond interest payments and so forth. Now, under present law, a railroad gets a set of trustees and they try to reverse that negative cash flow. If that can't be done, then the court must appoint receivers to protect the bondholders' interest—and this is usually done by holding a sale on the courthouse steps."

With PC, however, there are complications: "First, there's the social and national problem of how you get along without a Penn Central. Second, you find that PC has about 50 underlying railroad corporations that are not in bankruptcy. Quite obviously, when you get to the courthouse steps, all you're

up. FRA can help."

going to sell is the long-term lease on, just as an example, the Michigan Central. And I don't know anybody who's going to buy that, because MC will ask PC to return items included under that lease—locomotives, cars and so forth—and you have a situation where the Michigan Central could start operating as an individual railroad. So a sale on the courthouse steps would mean that a lot of individual railroads would be back in the railroad business rather than the coupon-clipping business. And it's questionable what that might portend for the national economy and the national transportation interest."

● **Help for the trustees.** The bankruptcy-law changes which Ingram has in mind would "allow the trustees to pare down operations to those which are floatable, or viable, and to sell off those parts which are a drain. Frankly, there are a number of segments of Penn Central that are just as profitable as any railroad in the country—but taken in total, PC is not profitable. Could it be that under a revised bankruptcy law the trustees could make the profit-and-loss determination and, one way or another, get rid of those parts that are not making a contribution to the national good or to the good of Penn Central?"

There would be another problem immediately created: What do you do about a piece of railroad which is required for transportation purposes but which is not profitable? One approach would be to jack up the pricing of the service so that those customers who require it pay for it. Ingram concedes that this may not be possible in all cases, and that some form of government operation might be required: "But I don't think Federal operation is what is really needed. It seems to me that in regional situations, the region involved should play a major part in solving its own transportation problems. I don't think this can be handled wisely from Washington, nor do I think Washington can make the best decisions about whether a piece of railroad is worth retaining in the first place. The governmental entities directly involved—cities, states, regions—should take the lead in deciding the future of those properties which are essential but which are not commercially viable."

● **Delays can be fatal.** Ingram uses Jersey Central as another example of the bind that trustees are in, under existing law: "You see the trustees promoting a plan of survival—that's their term for it—which would involve abandonment of more than half of the track-miles of CNJ. Almost all of this track is paralleled by other railroads which could pick up the traffic and handle it commingled with their own on a more profitable basis. But the trustees do not have the opportunity to work out something like this without approval of the ICC— without going through the hearing procedure and without giving all the people in all the places the right to be heard. We're all well aware that Commission proceedings can go on for years and years and years. And the one thing you just can't have in a negative-cash-flow situation is a proceeding that goes on for years and years and years—because you're going to run out of money before you get to the end of the road. You have to have some way to move quickly. You have to have conditions which allow the trustees the latitude they need to produce a viable system, and which also permit an adequate input toward a solution from the governmental entities in the area involved."

Essentially, of course, this is a legal problem—not a railroad one. But, Ingram says, "I don't think there's any question within FRA but that something like this is what has to be done. The question is as to how you can do it—and this is being studied by various groups, not the least of which is the American Bar Association."

Meanwhile, FRA is looking at immediate and specific things which government might also be doing to promote better transportation. Ingram talks about the legislative packages—regulatory and railroad-aid—which the Administration has worked on. And he boils it down to this: "If FRA succeeds in producing a climate within government that will allow railroads to prosper and grow, it will have made a signal contribution."

● **A "zone of reasonableness."** Anybody who has followed the new Administrator's career—at New York Central, Southern, Illinois Central—knows that he is no supporter of stuffy and stifling regulation. A railroad, he believes, "should have freedom to set rates, within a zone of reasonableness—the floor of which would be cost and the ceiling

of which would be set by competition or by the collective wisdom of the Congress. Railroads compete vigorously with truck lines and with barge lines and with other railroads for a significant portion of the total traffic available. Our position is that there is no reason for government to impose an arbitrary ceiling in that kind of competitive situation. The only place in which a ceiling would operate would be in a monopolistic situation—and there just aren't that many of them left."

As for railroad aid financially, Ingram's message comes through just as clearly: (1) On equipment, government aid might involve guarantees so that financing could be obtained at lowest-possible cost, with an acquisition-balance maintained between freight cars and motive power; and (2) on fixed plant, aid should be structured on a one-shot basis over a fixed period to get the industry over the hump on what appears to be a need for significant property-improvement programs.

How are railroads regarded these days in Washington? Ingram would reply with a kind of "Yes, but. . ."

To begin with, he says, "There's this tremendous interest in railroads—but it's a schizophrenic interest. Most of the government planners do believe that the railroad is probably the only form of transportation where you can get a significant improvement in traffic volume without major social problems—land-taking, increased pollution, increased noise levels and so forth. So government people have great interest in railroads in terms of new commitments to transportation capacity. At the same time, there is still the old robber-baron syndrome where government people—and this is especially true at the staff levels—just have a feeling that railroads can't quite be trusted."

● **A bad stereotype.** Ingram will argue with the stereotype—and fight it: "A good number of the railroad management people I know went to the same schools that these staff people went to. So I wonder, when I hear that management people are regarded as inept or uneducated. I can't conceive of their getting a worse education at Harvard or Yale or Michigan State or wherever than the staff people got. I think my task in this area is two-fold. First, there's the task of promoting the railroad industry as being a very important contributor to an improved national transportation capability. Second, there's the matter of educating government people to the real character of railroad management."

Can railroads help? They sure can, and John Ingram knows a couple of ways right off the top:

"We have a research center in Massachusetts, with a lot of good people—some of them right out of NASA and the moon project. They're doing technological research—and, frankly, some of them thought railroads were just something of little or no interest. They'd rather be working on new airport control systems or guided-vehicle highway systems, something like that. And this is good—but they should be working on railroad problems, too.

"Then, one day [Burlington Northern Chairman] Lou Menk stepped by to look at what was going on, and he invited these research people to come out and spend a week on BN. We put together a tour, BN did its part—and now we have a bunch of railfans at the lab."

Ingram is convinced that this kind of effort has to help: "I think it behooves the rest of the industry to go out and follow BN's lead, not just with researchers but with a lot of people in all areas of government. There aren't any steam engines out there any more, and potbellied robber barons aren't running around the country putting widows and orphans out of their homes. Railroads run an efficient transportation system. We want it to be more efficient, we want to show people what we're doing, we want to let people know what our major problems are—and we want to get as many people as possible helping us to solve those problems."

● **Manpower exchange.** On a more formal basis, there are opportunities in trading people between railroads and FRA. Three roads are involved in people-exchange now and, says Ingram, "I'd like to see more of this. This is a perfectly beautiful way to help government people understand the realities of railroading—and to help railroad people understand the realities of government."

And then, there is the matter of railroad representation in Washington. Ingram thinks it is "better than before, although there could still be some improvement. The real problem is that railroads are starting from 'way back. Railroads have a lower buildup of appreciation of their problems and a lower appreciation of their potential contributions than other forms of transportation or other businesses in general. Railroads don't just need good representation—they need excellent representation, in quality and in quantity. There's a backlog to catch up on—and it's going to take a few years to do it, to the point where good numbers of people in government understand railroad problems as they understand the problems of the airlines or of the airframe industry. It's not just a matter of how well we're doing. It's also a matter of how much we're doing, and how dedicated we are to overcoming the start-from-behind problem."

However long he is top man at FRA, Ingram is going to shake up more than a few people and, hopefully, shake down forever more than a few of the old ideas that have stifled industry progress internally and externally. Consider just two other ideas, at the outset:

—In this country, there are 225,000 rail/highway grade crossings, some protected and most not. Rail, highway and government interests want to do something about eliminating a good number of these crossings. More money for crossing projects, hopefully, will be forthcoming, because of this common concern.

—Piggyback is at a point where it is all potential and not much progress. Terminal congestion, most experts admit, has been a major factor in the plateauing. But a lot of major terminals cannot be expanded—except vertically. So, Ingram inquires, is it not possible that containerization will be the answer?

In the view of some observers, FRA has been something of a disappointment, in terms of its ability to come up with positive, forward-looking programs. Ingram talks like a man who wants to wipe away that image—and the odds are that the action will fit the words. ■

Why Ingram took the job

You are vice president-marketing of Illinois Central, you are making your mark in the industry, and it is a bold mark. Why do you take on the headaches of being administrator of FRA?

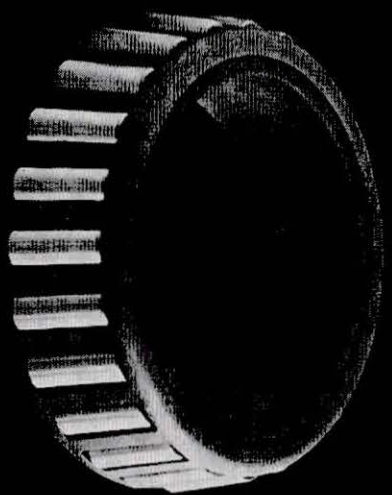
John Ingram has an answer: "I don't think you should criticize if you're not willing to make a contribution. I feel this way: If Secretary Volpe asked me to come down and be FRA Administrator and I said 'No'—well, it would be tough, looking at myself in the mirror and saying 'John, that was a great speech you made last night'—in which I might have been criticizing the FRA or the ICC or government in general. If they give me the opportunity to try to do something and I don't take it—where am I?"

BART cars ride on Brenco Bearings.

BART, San Francisco Bay Area Transportation, is more than a rapid transit. It is a transportation system that will open up employment and educational opportunities to underprivileged communities by providing greater mobility for citizens of isolated areas. BART cars are the most advanced rapid transit cars in the world... light, high-speed, low-maintenance... built by Rohr Corporation with Rockwell trucks and using the most modern tapered roller bearings available today... BRENCO.

Brenco Incorporated, Petersburg, Virginia.

BRENCO Tapered Roller Bearings



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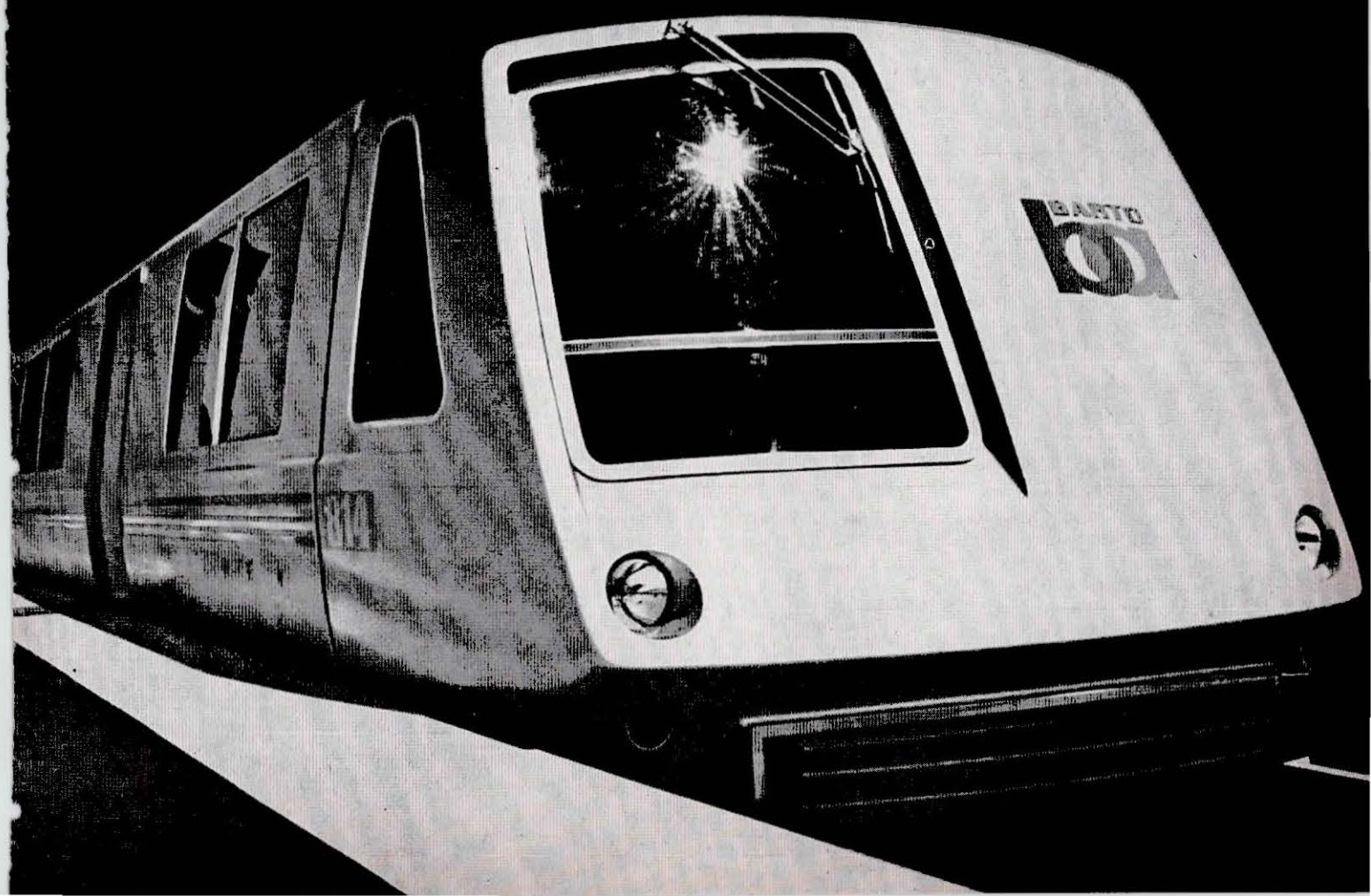


C&NW/UTU agreement: "The benefits

Chicago & North Western has been known to advertise "The Midwest's Finest Freight Service." And, while competitors would probably argue and C&NW's own transportation people might shy away from superlatives, one thing can be said for sure: North Western's service, "finest" or not, is getting still better. Part of the reason can be found in the agreement C&NW reached last July 22 with the United Transportation Union.

From operations and from traffic comes the good word:

E. A. Burkhardt, general superintendent-transportation, says North Western "has never had such consistent on-time performance, such generally-good train operation."

R. J. Degnan, assistant vice president-sales, finds performance "much better. From a sales standpoint, we can work with a great deal of confidence that we can deliver on what we promise."

● **Measuring the benefits.** How does the C&NW/UTU agreement figure in this? Coupled with the national agreement signed earlier with the Brotherhood of Locomotive Engineers, it has eased the way for North Western to greatly expand its operation of interdivisional runs. Benefits have been substantial—perhaps even a bit more substantial than C&NW people anticipated.

For some time, North Western has had a few interdivisional operations on its east-west mainline—involving four trains, to be exact. Now, C&NW has 27 such runs—adding 22 mainline trains and a way freight to the list.

Phase 2 of the road's program is now under way, as North Western and the operating unions are working on eight more trains.

At this point, just about everybody—C&NW, its employees and its customers—seems to be coming out ahead.

For the railroad, there are certain savings—which have been labeled worthwhile, if not yet substantial. As J. R. Wolfe, vice president-labor relations and staff services, points out, "You save some constructive allowance costs by eliminating initial and final terminal-delay payments at the intermediate terminals. You can eliminate payroll fringe costs if you can eliminate perhaps one or two crews out of a pool of five or six." But, Wolfe quickly adds, major dollar savings connected with work-rule changes are connected with amending the basis of pay—and the interdivisional-run rules negotiated by C&NW and by the National Railway Labor Conference do not touch the basis of pay.

North Western's major benefits, thus far, seem to be in the service area—and these benefits are spreading beyond just a speed-up in movement of the trains directly involved with the interdivisional operations.

Ray Degnan notes, for instance, that major central areas have tended to jam up during times of high-volume business. The crew runthroughs, he believes, have helped a lot in keeping main corridors open. And shipper response to C&NW service performance, he says, "has been significant—even in a soft economy, with a coal strike in progress and with certain other commodities down."

North Western sales people are judging progress in a couple of ways—by an increase in commendations from specific shippers coupled with a decrease in complaints, and by "our gaining new traffic that used to move adversely." "I'm convinced," says Degnan, "that we're going to be able to gain significant new traffic—and that this can be attributed mostly to improved service."

● **Improving operations.** On the operating side, Ed Burkhardt recalls that in some territories, C&NW used to have occasional crew shortages, especially on weekends or during peak-traffic periods. There were times when trains had to be held for rested crews, and times when crews had to be sent out after the minimum eight-hour rest. Interdivisional-run operations have helped to solve this problem.

Equally important, Burkhardt notes, crew runthroughs are getting the traffic moved faster—and not just because of time-savings directly concerned with changing crews. North Western had no particular problem with its premier trains; they are moving well. But, the road's GST concedes, secondary trains were suffering—because some trains would get into an intermediate terminal "and just die." Others would get to a yard "and somebody would decide to do some switching. The result was delay."

Now, things are different. At Butler (Milwaukee), for example, Chicago-Green Bay crews run through, power stays on the train—and there is simply no opportunity for intermediate-terminal delay.

The interdivisional runs North Western and the operating unions have worked out under the new agreements cover five routes, all of them important in C&NW's traffic patterns. North Western is running two trains each way daily between Chicago and Green Bay; two each way between Chicago and St. Louis; four each way between Chicago and Adams, Wis., and intermediate point in final terminal at Minneapolis; two each way between South Pekin, Ill., and Clinton, Iowa; and one each way between Chicago and Madison, Wis. One crew is replacing two on all these runs except Chicago-St. Louis, where it is a case of two crews replacing four.

How do operating personnel like the new setup? It is Jim Wolfe's belief that "Our men like them. Our older men are bidding on the jobs, and they're very pleased with them."

● **How runthroughs work.** Engine and train crews, for whatever reason, like to run—and on C&NW, they are running. On the Chicago-Green Bay route, for one example, a crew might

The Commiditrain:

Chicago & North Western has run its first series of commoditrains—and pronounced the operation a success (RA, Sept. 13, p. 16).

Because of the seasonal nature of the demand for the commodity—sand and gravel—operation has been suspended for the balance of the year. But C&NW people are confident that revival will come next spring. And they are confident that operation of these short, single-commodity, three-man-crew, cycle trains will be expanded in 1972. Under study right now are several other sand-and-gravel trains, as well as possible commoditrain applications for cement and scrap.

have been substantial"

leave Proviso (Chicago) on Train 187 at 11 p.m. on a Monday, arriving Green Bay at 8 a.m. Tuesday. After rest, the crew would take Train 182 out of Green Bay at 11 p.m. Tuesday, arriving Proviso at 8 a.m. Wednesday. And the cycle would begin again Thursday night out of Proviso.

So, crews are running. They are also making more money, faster: Over-miles are paid at the first-100-mile rate. And while the older hands are bidding in on the interdivisional runs, younger men on the seniority roster have something new to look forward to—something akin to the old "red apple" runs in crack passenger service.

North Western's Ed Burkhardt carries the passenger-train analogy a step further: On the interdivisional-run trains, he says, "We're running like a passenger operation—on time, or within a few minutes of the schedule, and it's happening consistently."

Burkhardt is well aware of the direct savings on constructive allowances and on reduced switching at intermediate points. But he is just as happy about the improved equipment utilization and opportunity for reduced per-diem costs which the runthroughs permit.

North Western has a key measurement used in the transportation department to check day-to-day performance. You get this measurement by dividing the number of cars online by the number of new loads obtained. The lower the resulting figure the better, of course and, while a low number is unusual in a soft-economy period, North Western is now seeing that number at its all-time low.

● **Tackling the branchline problem.** Still another benefit may become obvious as North Western moves ahead with its branchline-utilization program—a program designed to show what lines might be abandoned and what lines should be maintained (even though they may not be all that valuable today to the railroad or its present customers).

Anybody who can read a map is aware that C&NW is loaded with branchline routes, crisscrossing the largely agricultural areas of the upper Midwest. Acquisition of Minneapolis & St. Louis and merger with Chicago Great Western put more light-traffic mileage into the system. And, while North Western has been trying to pare away the least productive of its branches, it has run into a few operating problems in maintaining service at points where lines remained. Perhaps the worst of these "horror stories" involves a station on the former M&StL: Under present agreements, North Western has had to deadhead a home-terminal crew by auto or bus 350 miles one-way to get it to where it can pick up its train. Now with greater flexibility in setting up interdivisional or inter-seniority-district runs, C&NW wll be able to take a look at its branchline-operations situation in a new light, less handicapped by obsolete conditions and practices.

Actually, the interdivisional-run rule is one of two key provisions in which the C&NW UTU agreement differs from the national agreement (which still awaits completion and implementation).

The national pact provides for finality-of-decision on proposals to run through home terminals as well as through away-from-home terminals. North Western's agreement does not have that home-terminal finality clause. But, Jim Wolfe says, "We don't think we'll have any trouble working out an agreement with our employees." (The second major difference between the agreements is that the national provides $2 as a second meal allowance to UTU crew members after 12 hours at an away-from-home terminal; the C&NW UTU settlement omits this item.)

North Western took a certain amount of flak for pulling away from the NRLC and negotiating its own agreement with UTU, after the industry reversed itself on a lockout and decided to promulgate rules changes—while the roads chosen by UTU, North Western among them, took a strike. But the feeling of resentment seems to have subsided, as all concerned reflect on the respective agreements and on the conditions connected with C&NW's action. And around North Western, morale looks good.

● **Power from positive thinking.** Part of this could be connected with (1) a feeling that employee purchase of the railroad will be approved, and (2) the fact that success is a great morale-booster and C&NW is doing much better this year than last year (which itself showed improvement over 1969).

Part of it could also be related to North Western's way of doing business. Jim Wolfe once put it this way:

"Our concept of management is very deeply involved with people. We think that transportation companies' success is inextricably connected with the efforts their people put out. If your employees are with you, you're going to be a much better transportation company than if they are not. In fact, if they are not, you may not even be a transportation company for very long.

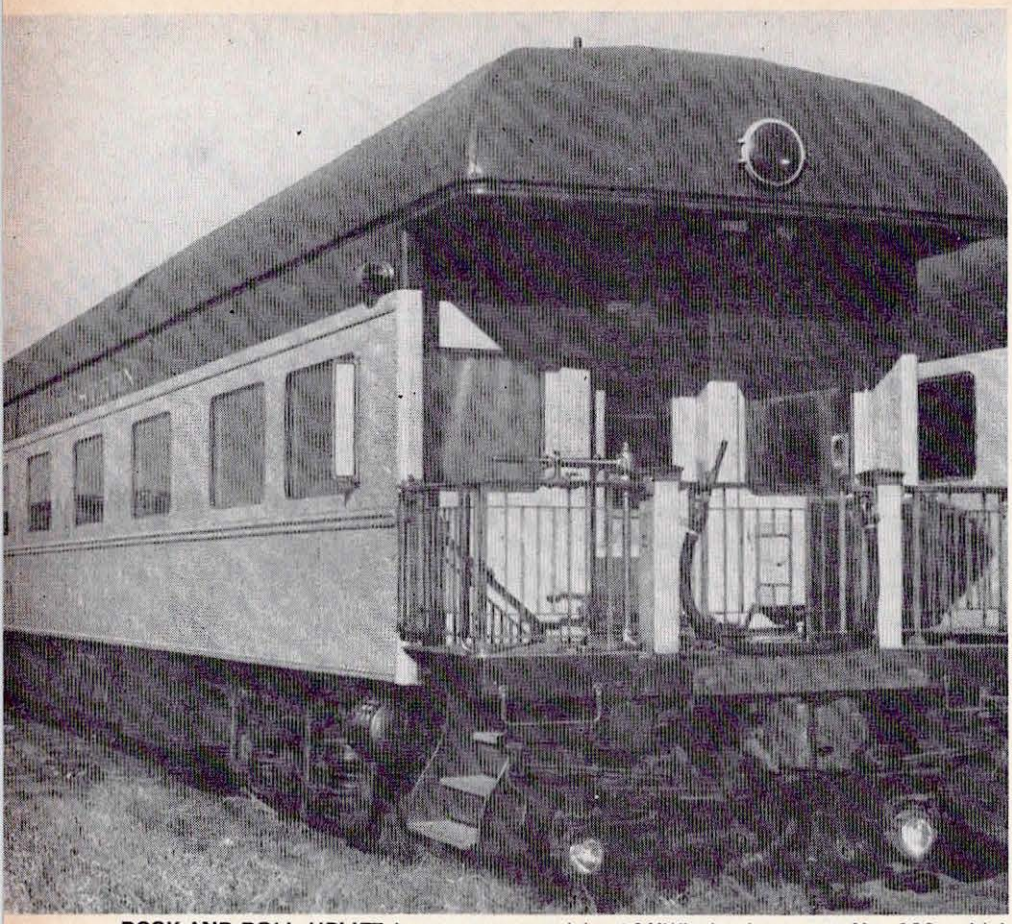
"Take, as a very simple example, the man who runs a match factory. It's pretty simple for a couple of supervisors to very closely supervise the production. But when you have 11,000 miles of track in 11 states, as we do, with some 700 assignments operating daily over that track, you can't supervise closely.

"Therefore, the service you give is subject to the morale, the feelings, the intentions of your people. You are, in a sense, the captive of your employees.

"We think it just makes good sense to do everything you can to relate to these employees—relate to them economically and from the standpoint of providing them with reasonable rules and working conditions—in return for the effort they give you in providing service to your customers. Which, after all, is the name of the game." ■

Everyone profits

The commoditrain concept, North Western's operating people point out, offers substantial improvement in equipment utilization—and works best in congested areas where a maze of seniority districts is involved. As one operating officer puts it, "A lot of the potential business lies in areas that might now be considered marginal, or worse, economically. But the railroad can handle it, and profitably, if we can control costs. With three-man crews and with crews operating across seniority districts, these sand-and-gravel commoditrains have been profitable all around —for us, for the employees and for the shipper and consignees."



ROCK-AND-ROLL UPLIFT is now measured by C&NW's business car No. 100, which has been outfitted with a Dynamic Track Analyzer.

C&NW pinpoints its derailment problems

PICK-UP DEVICE includes two gyroscopes, one sensitive to the roll axis of the axle and the other to the turn axis. Both are in fixed position with respect to the axle.

Chicago & North Western is taking an electronic approach to the prevention of derailments—by determining the precise locations where track conditions are conducive to rock-and-roll wheel uplift.

As a start, C&NW has concentrated on problems involving 100-ton covered-hopper cars. Other types of problem cars will be fed into the system later.

How does it work? Briefly, the system—installed in a business car—measures track deviations in cross level and alignment and relates their combined effect in producing rock-and-roll action that will cause a car's wheels to lift from the rail at a critical speed.

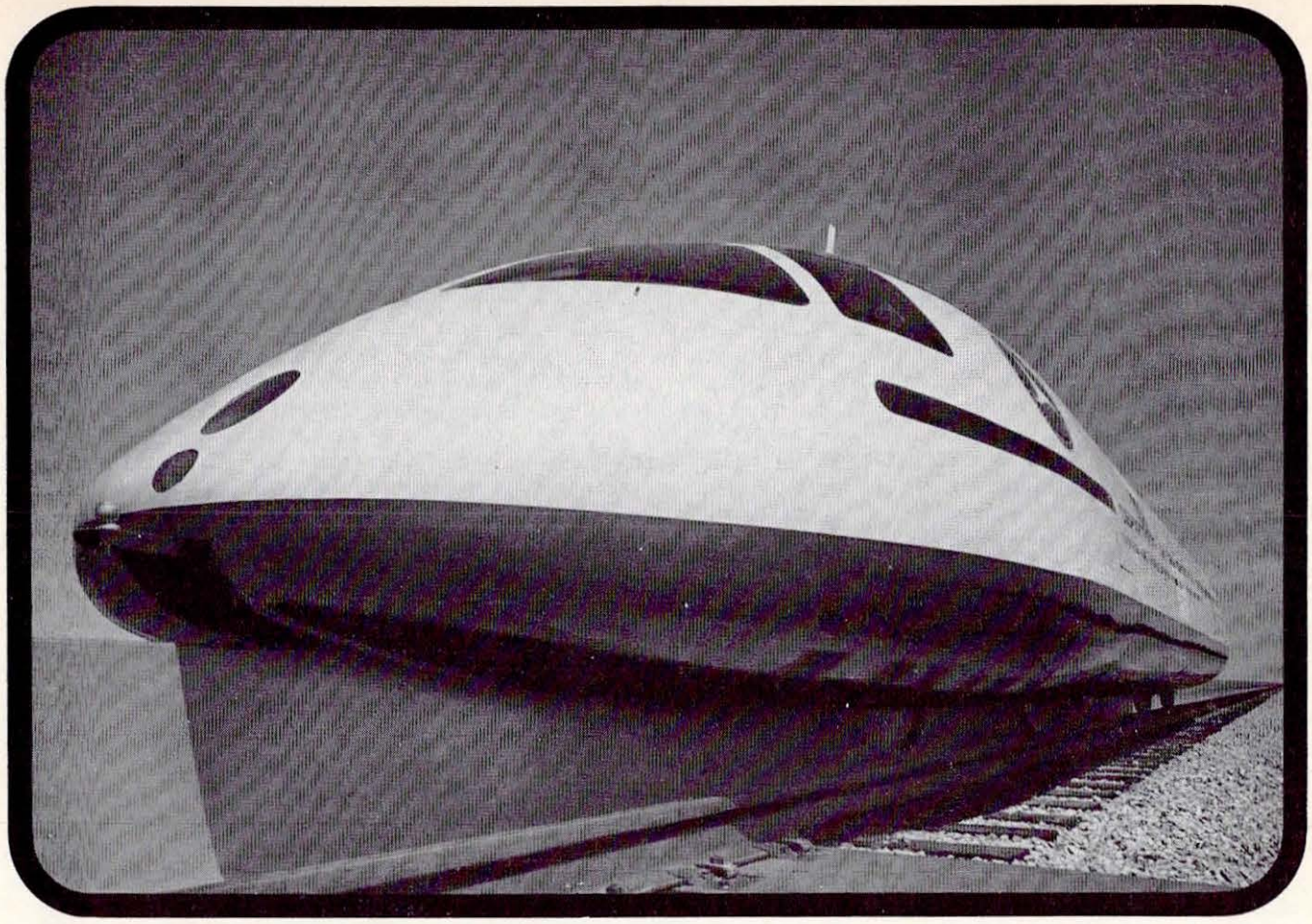
The system is a prototype unit of the Dynamic Track Analyzer that was developed by the Railroad Products Section, Engineered Magnetics Division, Gulton Industries, Inc., Hawthorne, Calif. The initial concept was evolved in collaboration with engineers of the Train Accident Prevention department of Chicago & North Western. Since the early development it has been a joint venture with the engineering department. The system consists of rate gyroscopes to give measurements, solid-state analog and digital computers, a data-processor to analyze the information, and a printer to record the data. It can be placed in a conventional car positioned as the last car of a train. It functions at train speeds up to 85 mph. The critical locations are shown on a printout sheet so track forces may find them and make necessary corrections.

● **How it originated.** Like most railroads, North Western has experienced derailments of certain cars at relatively slow speeds. A study initiated by the Train Accident Prevention (TAP) department showed that the 100-ton covered-hopper car was the worst offender, followed by other types, such as piggyback cars and 100-ton open-top gondolas. The covered hopper has a 40-foot± wheel base, approximately the same distance as the spacing between 39-foot rail joints, and it has a high center of gravity—two conditions ideal for setting up harmonic rock-and-roll car action.

TAP people were concerned about getting a better track-measuring device for measuring track deviations. But they wanted more than just the track geometry. They were aware that the rolling effect of a low joint, if it was followed by 100 feet or more of good surface, would be almost entirely negated; and that the effect of a really low joint could be damped out almost immediately by a following bad misalignment. Such bad joint and alignment conditions can be measured by conventional track-measuring cars, and perhaps each could have been considered serious enough to be of high priority for correction when measured by themselves. But, reasoned TAP, these deviations together might not need urgent correction nearly so badly as two others of lesser severity that might compound the car-rolling action.

● **Want car's-eye view.** C&NW wanted a system that would measure track deviations and movement under a passing train. In addition, they wanted the system to respond to and measure train characteristics, and they wanted it to measure track conditions with a car's-eye view. In other words, they were not as interested in track deviations per se as they were in their effect on the rolling stock. If a car were bounced or jolted by a track deviation but wheels would remain on the rail, that was not as serious as a wheel lift caused by car roll, with the flange clearing the rail.

As its study progressed, C&NW knew that the covered-hopper cars would be



Introducing the train of tomorrow.

This is no UFO. The U.S. Department of Transportation identifies it as its own LIM (Linear Induction Motor) test car. And the way things look, it could give ground-transportation a whole new dimension in speed and efficiency.

With a rated speed of 250 mph, this vehicle of the future is propelled by the electromagnetic interaction of its Linear Induction Motor with a conductor fin centered in the track. Between, we might add, CF&I rails specially made to take the high stresses and strains imposed by such brute speed.

LIM testing is one stage of a far-sighted government program to develop transportation that incorporates the privacy and flexibility of an automobile with the safety, high speed and lower pollution levels of rail systems. For our part, CF&I is proud of its involvement in these pioneering efforts. Proud too, that our own Hi-Si rails, Hi-Cant tie plates and accessories were selected to help carry new concepts into reality.

But since we're steel men, we're not about to stop now. We'll keep right on innovating and improving our products for even greater safety and economy. Count on us today. To put you on the right track to tomorrow. **We Serve You Right.**

CF&I STEEL

CF&I Steel Corporation

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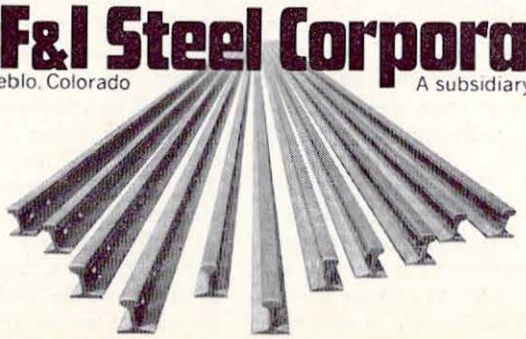


Circle 8 on coupon page 47

ONE PREVENTED DERAILMENT MAKES IT PAY OFF

operated anywhere on the system, branchlines as well as mainlines. Also, the so-called "critical speed" (12-22 mph) that induced the worst rock-and-roll action, could occur anywhere on the system, because trains might be stopped for one reason or another. These considerations introduced two other factors in the design of the measuring system: (1) It must measure track conditions at train speeds so it can be placed in a train operated on any line; and (2) it must interpolate track conditions to the 17-mph critical speed even while doing its measuring at normal train speeds.

By this time it became evident that only a computer could produce answers under these conditions. The railroad then turned to the electronic experts at Gulton Industries for help.

Gulton pointed out that for a computer to predict rock-and-roll car action it must have certain information about the characteristics of the car. Two things it had to know were the natural rocking frequency of the car and its damping factor. These were determined by using a crane to lift one side of a loaded covered hopper car until some wheel lift was achieved and then allowing it to drop. The desired information was then obtained from transducers that had been applied to the car, and making strip charts of the rocking action. From this the action could be analyzed and calculated. Many test reports and other research from throughout the industry were reviewed and, with assistance from the mechanical department, all required car data were collected. This information, termed car model No. 1, was set in the computer.

● **Check computer data.** C&NW knew that all cars have a natural tendency to rock, and that track deviations will add to or detract from the roll. The effect of such track conditions was computed and this information was also introduced into the computer. Then, the railroad verified its findings by testing a loaded covered-hopper car on a side track, specifically selected due to line and surface imperfections, to produce roll and wheel-lifting. The car was pulled back and forth by a switch engine until all information had been verified. The computer predicted the rolling action with remarkable accuracy.

The Dynamic Track Analyzer has a pick-up device mounted on one axle of the rear truck. It includes two gyroscopes, one sensitive to the roll axis and the other to the turn axis. These are in a fixed position with respect to one axle, the housing being bolted to the bearing cap, which is locked to the axle. Transducers convert the gyro measurements to signals.

The speedometer pick-up is mounted on a different axle of the same truck and on the same side as the transducer housing. The wheels on this axle have been turned and trued to the exact 36-in. tread diameter. Their brakes have been disabled to prevent rapid tread wear and accumulation of inaccuracies. Another gyroscope within the computer cabinet measures spirals and curves.

Through electrical signals from the gyroscopes, the cross level and alignment are measured, while the odometer measures the train speed and distance traveled. Track geometry defects are divided into three classes: Minimums, which do not require immediate atention; subcritical defects, which exert half the power of the critical level and evidence increased rate of deterioration of the rail and rolling stock: and critical defects which could, given the right circumstances, cause a derailment. The latter defects cause wheel lift.

● **Deviations referenced to a path.** Although the Dynamic Track Analyzer measures the low joints and misalignments, it does not report them, except insofar as they affect car roll. For instance, it does not show curvature or super-elevation. But, should two low joints change the super-elevation from 3 inches to 2¾ inches the ¼-inch difference from normal will be shown because it affects car roll. The concept of the track analyzer is that it should measure deviations from a reference line or "true path." This includes spirals and curves. But the basic turn rate from the computer cabinet-mounted gyroscope is subtracted from that of the truck-mounted gyro, leaving only the misalignment signal desired.

Two printing modes, both automatic, are used. The total minimum defects and total sub-critical defects are counted and printed for each statute mile of track analyzed. The train speed at that time, and the first three digits of the odometer readings in miles, also are shown. When a sub-critical or critical defect is encountered, the printout sheet shows either the letter "S" for sub-critical or "C" for critical, followed by the total roll angle, the transverse (alignment) displacement, the cross-level displacement and the location in hundredths of a mile. At the automatic print-out at the end of a statute mile, the defect count returns to zero. The odometer can be adjusted when short or long miles are traveled.

In addition to these two automatic printing modes, the printer can be instructed to "print all data." In this case, every deviation will be printed. This might be done when the roadmaster reports he is having trouble in maintaining track, or when the track has been reworked since a previous testing.

● **More tests are planned.** The Dynamic Track Analyzer was installed on one of C&NW's two remaining business cars, thereby increasing utilization of this equipment, which had been used only occasionally for visual inspection trips. Since that time it has tested track between Proviso, Ill., and Green Bay, Wis.; from Proviso to Fremont, Neb.; and from Proviso to Madison, Ill., plus test runs made in the Chicago suburban territory. Other test runs are planned soon for the track between Proviso and Minneapolis; Proviso and Kansas City; and Minneapolis and Omaha. It is contemplated that the track on all important main lines will be tested at least twice each year, and the other lines once a year.

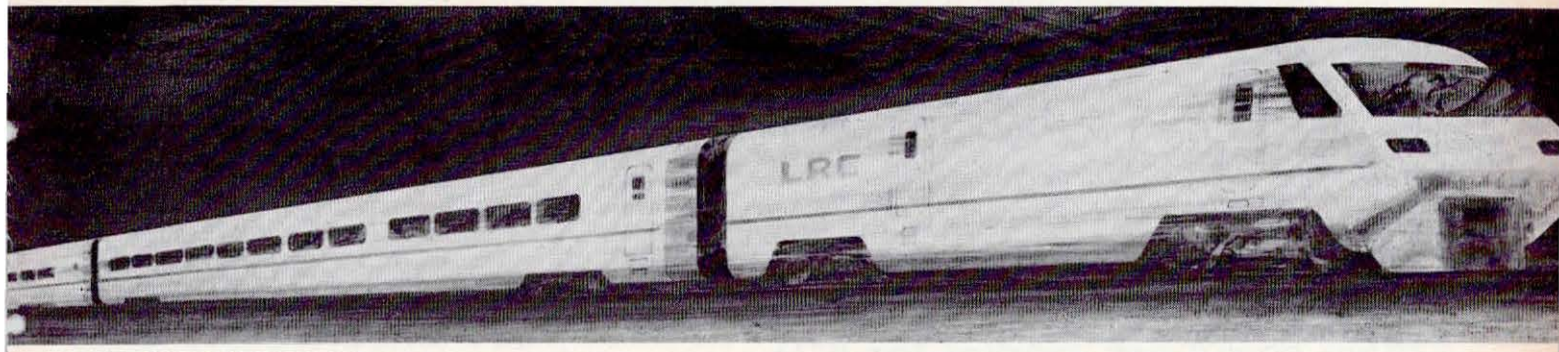
The business car is equipped with radio. So whenever a critical track condition is found, track forces can be alerted immediately and corrective steps taken. After test trips, the print-out sheet is examined and a list of sub-critical and critical locations is made and sent to the division engineer.

The Train Accident Prevention department is satisfied that the Dynamic Track Analyzer does predict potential derailment areas and that it is performing satisfactorily. The system will be under control of the engineering department for the scheduling of its operation, and for finding and eliminating critical track conditions.

J. A. Barnes, assistant chief engineer-maintenance, says the Dynamic Track Analyzer is uniquely valuable in picking out vulnerable areas where conditions are conducive to derailment of loaded covered-hopper cars.

The next step, says Barnes, is to test other "problem" cars to determine their rocking characteristics. When this information is developed, it will be incorporated within the computer as additional car models. Then, test runs of the track analyzer at normal train speeds can be safeguarding any "problem" cars.

Is the track analyzer economically practicable? Barnes says that if just one major derailment were prevented, the money his road had invested in this unit will have been well worthwhile. ■



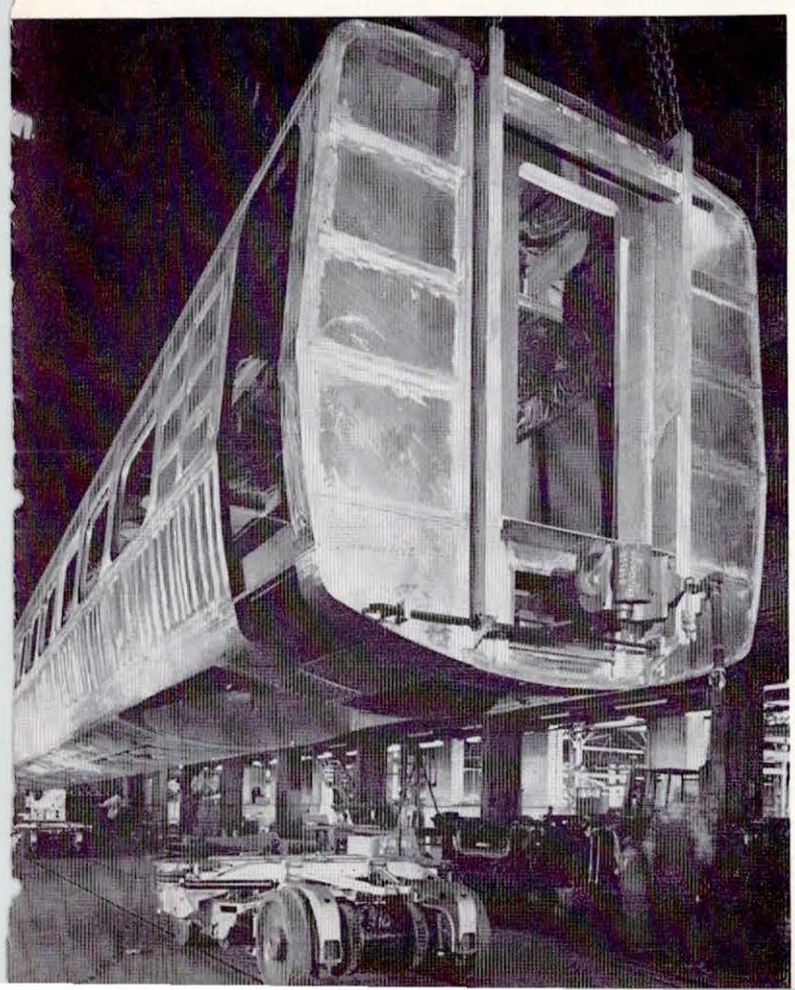
LOW-SLUNG LOCOMOTIVE will be completed early next year; LRC car will then be tested in higher speed range.

LRC: Canada enters high-speed race

Competition for building the next generation of intercity passenger trains is heating up. The U.S.-developed TurboTrain has been operating for several years with varying degrees of success. Britain is banking on APT (Advanced Passenger Train) which soon is to begin full-scale testing. Now a Canadian consortium has unveiled its bilingual entry, the LRC (Light, Rapid, Comfortable in English; Leger, Rapide, Confortable in French).

At stake is a potential world-wide market for high-speed equipment to serve major population centers up to 400 miles apart. The primary constraint on designers has been to produce a train with the ability to operate over existing rail routes at substantially higher speeds without expensive rebuilding of curves or the necessity for maintaining track surface to uneconomical standards.

LRC shares with APT the hydraulic banking, or active suspension, which neutralizes uncompensated centrifugal forces on passengers when traversing curves at high speed. The suspension for LRC is based on a two-axle truck with many conventional characteristics—rigid, one-piece truck frame; primary and secondary springing similar to that used on many recent coaches, and viscous damping. The principal departure is the pair of bolsters on each truck, along with the link mechanism which produces a roll center close to that of the passenger seat location. The hydraulic banking mechanism counteracts centrifugal force (or "unbalanced superelevation") through the servo-controlled roll bolster in each truck which forms a



DEMONSTRATION RUN with LRC included as passengers (from left) J. W. Pickersgill, president of Canadian Transport Commission; R. L. Grassby, president of MLW Industries; R. N. Dobson, development director for Dofasco; and H. Corrigan, president of Alcan Canada.

TRUCK MODIFICATIONS are being made at MLW plant following initial test cycle. Functioning of hydraulic banking between pair of bolsters on each truck has worked satisfactorily; effort now is to refine vertical ride. Carbody has been given structural tests.

Britain sees brisk market for APT

Britain's entry in the high-speed sweepstakes is the Advanced Passenger Train (APT), now in prototype production at British Rail's Derby Research Center in England (RA, August 9, p. 53).

APT's designers claim that the train, with its new suspension system and lightweight construction, will be "the fastest, quietest and smoothest riding in the world, and the first to be able to run at very high speed—up to 155 mph—on existing rail routes with little or no alteration to the track and signaling."

British Rail Chairman Richard Marsh told Railway Age in an Oct. 28 interview that 40 countries, including the U.S., are interested in the APT. Asked if he expects to see an APT running on U.S. rails in the near, intermediate or far future, Marsh replied:

"If the U.S. decides to stay in the passenger railway business, then I think that they will find themselves purchasing the APT, because I don't think that there's another vehicle in that state of development that can compete with the APT." At the same time, Marsh conceded that "we haven't sold one yet, and there's plenty of other competition." The "competition" includes Canada's LRC, and United Aircraft TurboTrains.

Marsh was in the U.S., along with APT's principal designer, Dr. Sydney Jones, to testify before the Senate Surface Transportation Subcommitte Dr. Jones is the research member of the British Rail board.

On Oct. 28, Marsh made a 50-minute slide presentation before Senator Hartke's subcommittee on the structure and performance of Britain's nationalized railway system, noting, among other things, that British Rail operates 1,000 intercity passenger trains a day (plus 15,000 commuter trains), and that 51.2% of total British rail revenues come from passenger service.

On Oct. 29, Dr. Jones made another 50-minute presentation before the Senate subcommittee—describing in some detail British Rail's hopes for the APT.

He listed these principal features of the APT:

"1. The vehicles are stable with worn wheel profiles up to at least 155 mph.

"2. On curves, speeds about 50% higher than those now possible will be attainable without flange contact. This is achieved by a unique 'steering' mechanism which ensures that the axles are radial for all normal main line curves.

"3. The construction is lightweight to assist both braking and adhesion, and particular care has been taken to keep down unsprung weight. The provision of tilt to the carbody will remove the sensation of lateral acceleration on curves."

The APT is to go into experimental commercial service in Britain in 1975. But British Rail wants to make certain that all bugs have been removed before putting the APT onto the international market—perhaps in 1976, says Marsh.

British Rail plans to build two prototype APT trains—one with gas turbine propulsion and one with electric propulsion.

Alan Wickens, the APT project's design chief, says that the train's high-speed capability is due to "a successful development in truck and suspension design achieved through a close study at Derby of the way vehicles ride on track and their behavior at high speeds. We now know what causes vehicles to oscillate or 'hunt' from side to side above a certain speed and this knowledge has enabled us to design vehicles that will ride satisfactorily at speeds up to and beyond 150 mph."

The Budd Co. heads a consortium which holds North American rights to the APT.

separate, stable platform that is always functioning to provide the carbody with the correct bank angle for passenger comfort. This patented suspension is a product of Dominion Foundries and Steel, a member of the LRC consortium along with MLW Industries and Alcan Canada Products.

● **Not esoteric.** "The application of the new suspension system brings next generation performance to railroading without pioneering esoteric technology," explains R. N. Dobson, Dofasco's director of product development. "It's a case of using existing technology to the limit and of making the most efficient use of the operational safety limits inherent in all train designs." For instance, conventional 30-inch forged wheels from Canadian Steel Wheel are used.

LRC is to operate over existing curves at speeds 35% to 40% higher than possible with conventional cars.

The consortium is being aided by a grant from Canada's Department of Industry, Trade and Commerce. Development cost is estimated at $2.5 million. Presently the project involves the 85-foot passenger coach which is completed and a 2,900-hp diesel-electric locomotive to be finished next March.

The concept for a complete train could involve cars pulled by a single-unit locomotive, or handled between a pair of the 2,900-hp units operated in a push/pull mode. Such a train would operate up to 120 mph on existing track, making possible a Montreal/Toronto run (335 miles) in 3 hours 20 minutes. Serious development commenced in 1967; prototype construction in 1970.

● **Canadian challenge.** A year ago the Canadian Transport Commission study of intercity passenger transport pointed out that "the major conclusion of the study is that the most profitable strategy to adopt involves maximizing the potential of existing railway facilities through introduction of new vehicle technology." And, observes H. Corrigan, Alcan president, "we feel that LRC comprises just that technology."

J. W. Pickersgill, CTC president, said his first look at LRC gave him "a lot of hope." But, he continued, "try to get most of the bugs out before trying it on the public." Now the car is back at the builder's plant, MLW Industries, for refinement of the truck's vertical ride. Then, again under Canadian National engineers, road testing will resume.

● **Low-slung profile.** LRC cars and locomotive have an over-all height of 11 feet 5 inches, 2 feet lower than conventional equipment. Alcan did the structural design and provided the aluminum sheet and extrusions for the low-profile coach body. Detailed design and fabrication was carried out by MLW. The completed car weighs 67,000 pounds. ■

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You'll renew more axles and wheels at less cost with Farrel wheel shop equipment. Higher speeds. Greater accuracy. Minimum manpower. Take these three Farrels:

Diesel-wheel borer. Rough bores, finish bores, and chamfers in continuous cycle. Will face, turn both sides of hub and face flange side of wheel rim. Wheels are centered and chucked. Fully automatic. Accurate.

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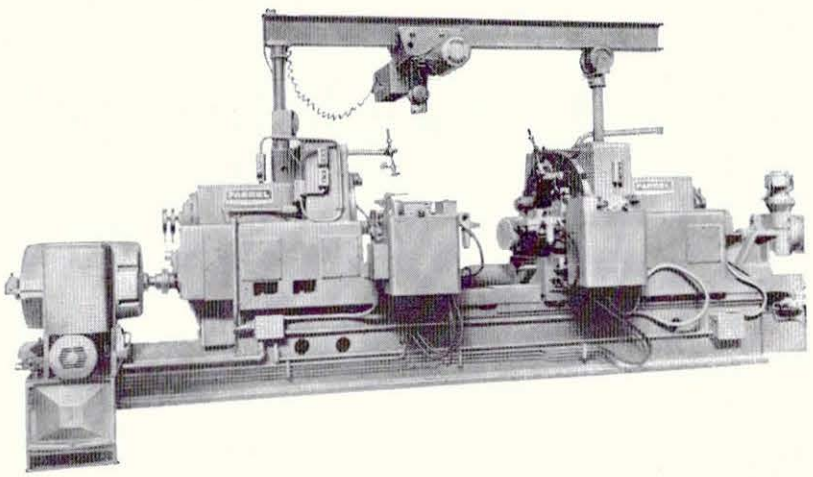

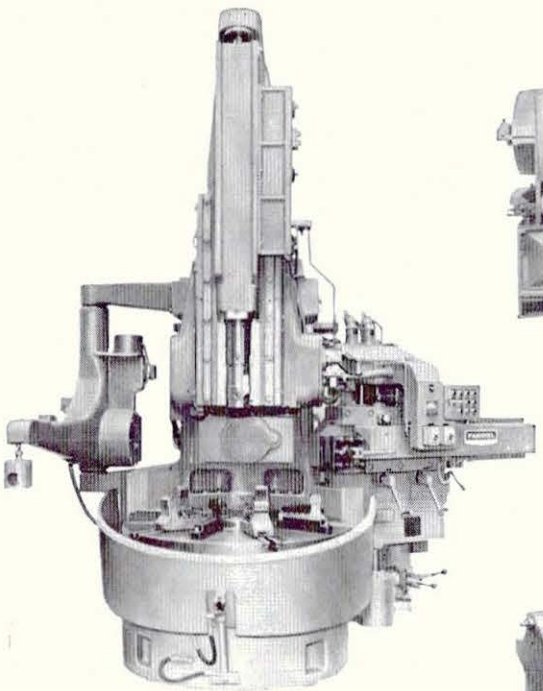

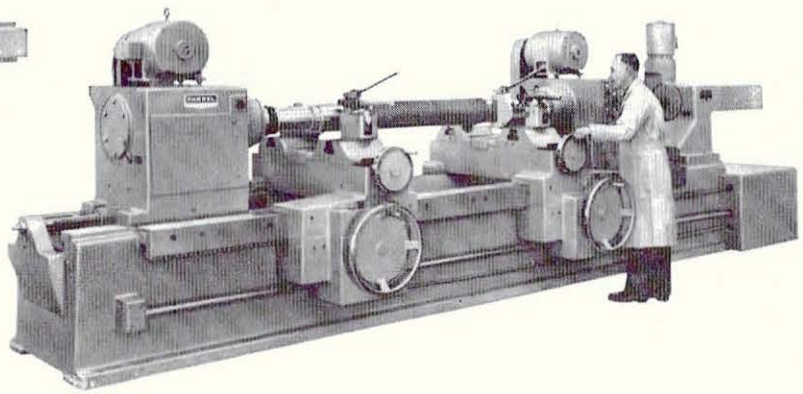

FARREL where railroads shop for machine tools

FR-290

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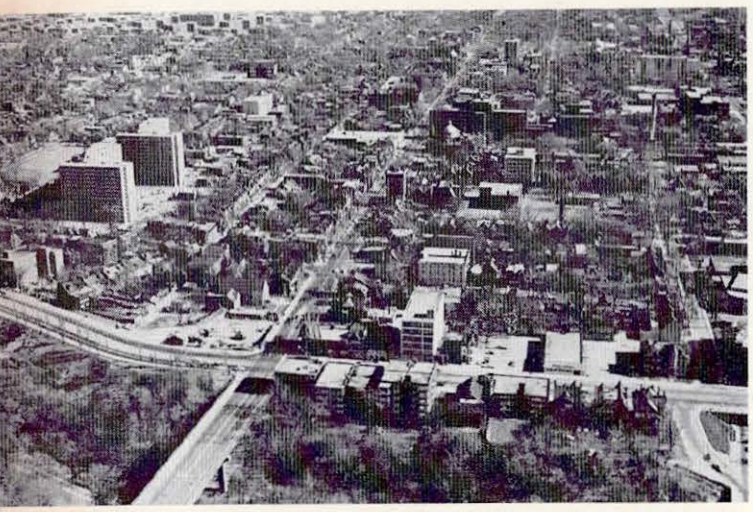
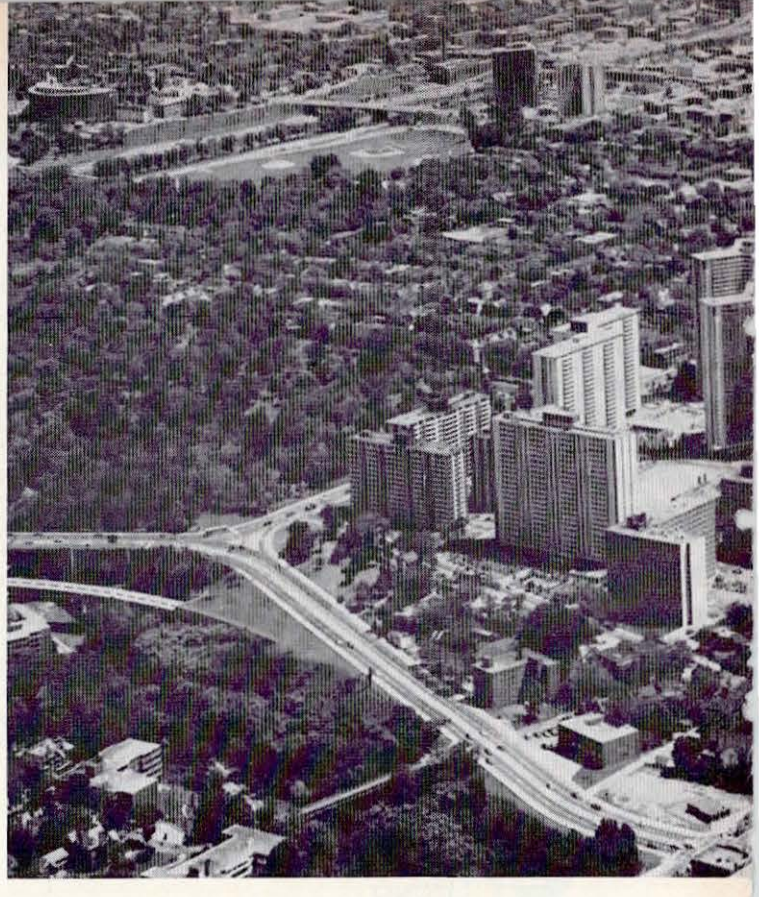




TORONTO, BEFORE AND AFTER: The growth sparked by the north-south Yonge St. line was fantastic. So Torontonians tried it again with an east-west line. Here's Sherbourne St. before that second subway (Bloor-Danforth) arrived, and then after.

If transit comes, can a real estate

Real estate men know that transit more than pays its way in the building boom it triggers. But not all fight for it.

By JOE ASHER

Everybody knows the San Francisco and Toronto stories. You put in a rapid transit line, it touches off a real estate boom, land values soar, and the surrounding economic benefits pay for transit many times over.

Everybody knows this, that is, in the transit field. What about the real estate developers? They are the ones who get the supposedly big windfall from any rise in land values.

Railway Age sounded out some real estate developers on this point. *Big* real estate developers, that is, with nationally known names.

Conclusion: The big guys are slowly getting on the bandwagon. Some have been there enthusiastically for years. And although not all read the transit lesson precisely the same way, there is no doubt others are joining up now.

● **Back to Bay Area.** Take the *sequel* to the San Francisco story. The part about $1 billion-plus for new downtown construction along Market St. is already will known. What is not so well known is that other communities where Bay Area Rapid Transit lines will go are getting plenty of benefits, too.

For example, Walnut Creek. That is exurbia, except for the fact that BART will run there. Dillingham Construction Co. is putting up two 10-story office buildings in Walnut Creek.

Or Pittsburg. That's even further out, and *not* on a BART line. Kaufman & Broad is putting in a $45-million residential development, there, and Dennis O'Brian, president of K&B's San Francisco-San Jose division, has some interesting things to say about that.

"You can't build any more in places like Walnut Creek, because prices have gone up so much. You'd have to pay $30,000 to $40,000 for a house, and we're aiming at the popular price market in the $20,000 range. So we don't look at places right at the stations, but at those within a reasonable distance of a BART station—say a 20-minute drive. Like Pittsburg. It's going to be a great growth area."

And oh, yes, K&B is putting up two more residential developments in the same East Bay area, one at Milipitas, one at Union City—both within short distances of BART stations. The three developments together are worth around $110 million, and K&B is looking for more. Says O'Brian: "BART isn't the only consideration in where we go, but it certainly is a major one."

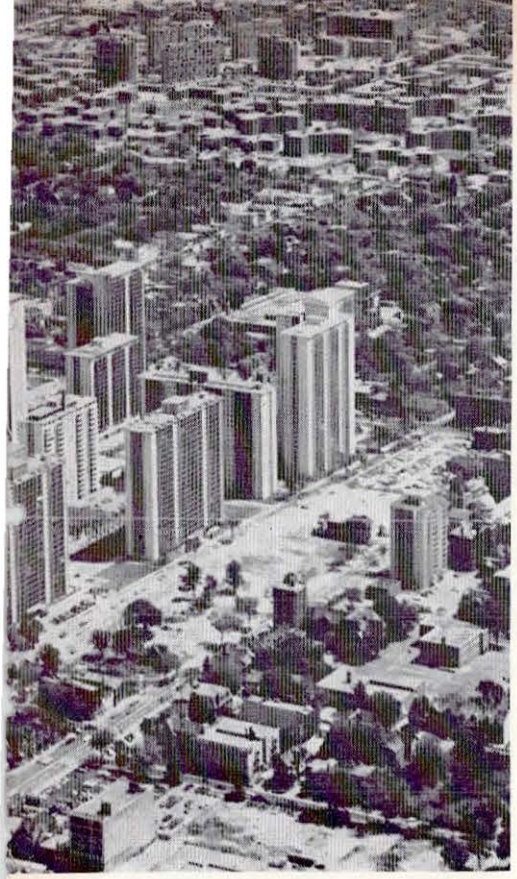
● **Looking ahead.** Other developers in the Bay Area have similar stories to tell. Paul Rose, marketing director of Brown & Kaufman (the shelter group of Potlatch), says: "We're constantly tracking where the transit lines and their extensions will go, with an eye on getting in new subdivisions."

The Bay Area is not the only example. It is two years since the Delaware River Port Authority built its PATCO line linking Philadelphia-Camden with the south Jersey suburbs.

● **A near Echelon.** Rouse Co. is finishing the first phase of an $80-million business and residential development called Echelon, smack on the PATCO line. Their advertising makes much of the fact that the community is just 22 minutes from downtown Philadelphia "on the new high-speed line."

Rouse is famous as the developer of the new town of Columbia, Md., between Washington and Baltimore. There are signs now that Rouse regrets not having thought more about transit access in the past.

A Rouse spokesman points out that (a) they are hoping that the transit system Baltimore eventually builds will



SAN FRANCISCO: The foot of Market St. used to be a shambles. But $1 billion in new construction changed all that.

SOUTH JERSEY: This $80 million living and shopping complex built by Rouse Co. is minutes from downtown—by transit.

developer be far behind?

have a spur out to Columbia; (b) their previous development in the south Jersey region was on a highway, without transit access; (c) they want to tie in a planned development in the Miami area with a proposed transit system there.

In the Boston area, State St. Bank & Trust Co. is building a $100-million-plus complex in Quincy, Mass., that amounts to a new town, and it is directly served by the Massachusetts Bay Transportation Authority's new South Shore Line.

Called State Street South and covering some 80 acres, it will house the bank's own computer center, have retail shops, a department store, office space and apartment buildings.

● **No wait in Washington.** In Washington, D.C., some locations are doubling and tripling in value, if they are conveniently located to the coming Metro stations, according to Nicholas Roll, director of real estate for the Washington Metropolitan Area Transportation Authority. "We see a lot of speculation, and a lot of wait-and-see along the downtown routes. But in the outlying areas, contracts are being signed pegging the real estate price to whether a transit line is in there or not within ten years," Roll says.

He also notes that a 20-year program to develop a $1-billion office and shopping complex in suburban Rockville, Md., depends on a zoning decision. The complex would be served by a Metro line and house such blue chip tenants as Humble Oil and Neiman-Marcus.

Acording to Peter Pattison, vice president of Uris Construction Co., "There's a saying in this business that there are three important rules about real estate—location, location, location."

Accordingly, Uris is high on transit. Three out of five buildings in Penn Center, Philadelphia are theirs, and that is where three commuter lines and two subways come together. "Location was obviously the prime factor there," says Pattison. And he notes that in New York, Uris has an office building midtown that is adjacent to two subway lines, and is constructing another in the financial district for which Uris will build its own subway access.

● **No excess of access.** Helmsley-Spear and Tishman Realty & Construction Co. both have similar stories to tell, stressing mass transit access and the need for more of it. William J. Williams, a senior vice president at Tishman, makes much of the fact that Two Penn Plaza in New York City, a 29-story office building of which Tishman was co-developer, "is 100% rented and has a waiting list of tenants. And that's in a soft market. Why? Because it's directly over Penn Station and close by all the subways."

Tishman also developed the 20-story Gateway Center in Chicago, adjacent to two commuter terminals and not far from the Chicago Transit Authority's lines. And George Krambles, superintendent of research and planning for the Chicago Transit Authority, reports firm plans for a number of nationally known companies to tie their existing downtown headquarters into the coming Loop subway, or build new headquarters right there. The new Sears Roebuck tower, the tallest building in the world (110 stories) will be right on top of the subway, Krambles says.

Other Tishman developments include 11 office buildings along Wilshire Blvd. in Los Angeles. The avenue has good bus access and would have been the route of the proposed rapid transit system.

"Would have been" is the rub, because the voters turned down a bond issue to build it. Tishman supported that bond issue and others elsewhere, and Tishman is by no means the only developer to support transit.

● **Massing for transit?** But how far developers as a group will go in the transit cause is another question. What it boils down to is that from the real estate point of view, access is access. Some see transit as a way of getting better access that is cheaper for the community in the long run. Others wel-

come it if it happens to be there, but can get along nicely without it.

Uris, for example, can swing both ways. It is building an enormous residential complex called Blue Hill in Rockland County, outside New York City. Access to the city will be by highway.

Uris' Pattison says he would like to see rail access, too, but it is not vital. William Zeckendorf had proposed redeveloping the defunct Stewart Air Force Base, and putting in a high-speed line that goes past the Blue Hill site into the city. "If it came about," says Pattison, "we'd like to be served by that line.

But so far as the idea of pressing for transit to *mold* density—up or down, according to broad regional needs—Pattison is not so sure. "A dictator, a Napoleon III, who rebuilt Paris, could do that. We couldn't. In this business you can only look two to five years ahead. If you're further ahead of the market than that, you go broke. Look at Zeckendorf. He was often ahead of his time. And he went broke."

Pattison's attitude is anything but unusual. The proof is all the real estate activity in places across the country that have plenty of highway access, but don't now and maybe never will have rapid transit.

Men like Harry Helmsley, president of Helmsley-Spear, and a power in New York real estate life, still cling to the idea that a few high-density downtowns like New York, Chicago and San Francisco need rapid transit, but spread out places like Los Angeles can do without it. Helmsley, himself an avid booster of transit for New York, thinks L.A. will do just fine "if enough parking space is available."

● **Voices in wilderness.** So the Tishman people were voices crying in the wilderness when they complained of the economic waste of having to construct so much parking space on valuable Wilshire Blvd. property, instead of building rapid transit. And the Southern California Rapid Transit District was a voice in the wilderness, too, although it showed that Wilshire Blvd. did indeed have the traffic densities to support rapid transit.

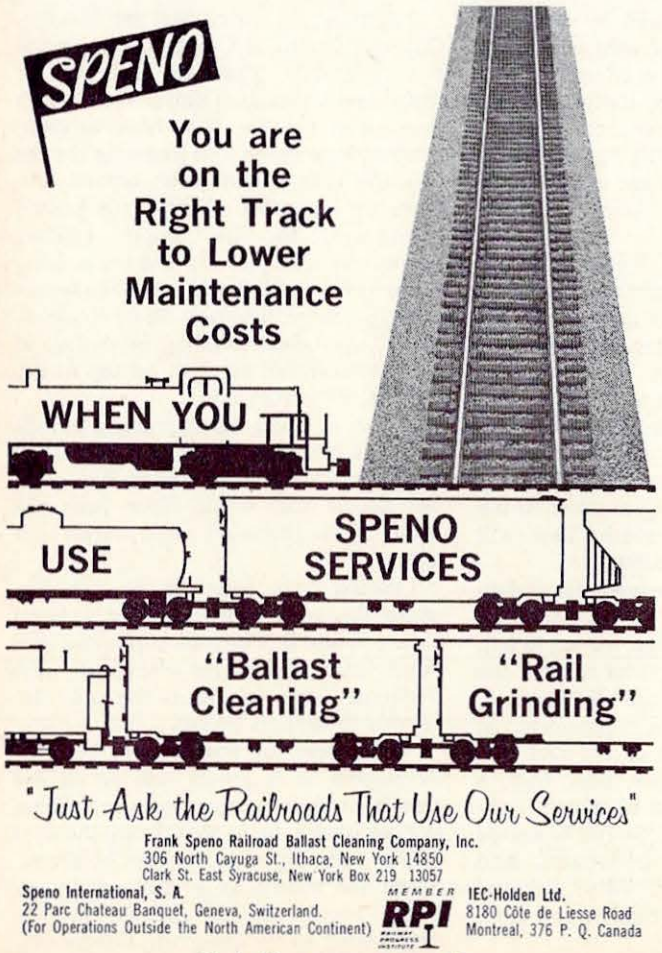
Again, there is the lesson of Toronto —by no means a high-density city like New York. The Toronto Real Estate Board noted a $15-billion appreciation in physical value in the Metropolitan area to around $50 billion, and said: "Two-thirds is attributable to the existence of the Yonge Street subway."

And no wonder. A. E. LePage, a Toronto real estate firm, surveyed recent construction and found 90% of all office building and 50% of all apartment construction within a five-minute walk of the subway system. Besides the obvious gold mine for developers who jumped the right way at the right time, there is the huge rise in tax assessments for the city, which covers subway construction costs.

The lesson was so clear that Toronto added an east-west subway to its existing north-south line, has plans for other lines, and vetoed an expressway extension down-town, just as San Francisco did before it.

Montreal has not done any quantifying of what its own Metro has done for real estate values. A Montreal Transportation Commission spokesman simply notes "a marked rise in values at the western end of the land, near Atwater." But it is worth adding that MTC was successful in getting the city fathers to go along with a $430 million program to double the five-year-old Metro's network within the next few years.

● **Getting the message.** So there you have it. Most real estate developers welcome transit if it is there. Some, like Tishman and the Torontonians, will go further than others in fighting for it. But remember what Alvin Rice, executive vice president of Bank of America, told this year's Pittsburgh Conference on Urban Transportation about a supposedly low-density place like Los Angeles: "In a city where a fast-buck artist can start a car pool for maids charging them $8 a day each for travel to their jobs—something has to be done." ■



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We'll bet a cigar you don't know about our new baby. It's a single face cotton fiber lube filter with our new patented method of maintaining pleat separation. The total surface filters effectively. Exceptional absorption, cling ability and long life. You know about it? Tell your Wix man—he's got a good cigar for you. Wix Corporation, Gastonia, North Carolina 28052.

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It has never been so urgent to train and upgrade employes ——or so easy!

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Home-study courses, tailored to the different needs of the maintenance-of-equipment department, can develop skilled journeymen from your present force of unskilled labor. It can cost as little as $6 per month per trainee. The Railway Educational Bureau provides the courses, and does the grading.

Many railroads use it!

The Bureau already has formal arrangements with about a third of the Class I railroads, and, with many industrial and other short-line roads. The completion of four-year courses qualifies apprentices as journeymen. Some roads use accelerated programs, turning out skilled machinists, electricians, carmen, car inspectors and other craftsmen in as little as three years. In the case of especially responsive students, two years is sufficient for the regular four-year course. Many other railroads use shorter REB courses for upgrading and refreshing. The Bureau also offers four two-year courses, as follows: Locomotive Engineers, covering diesel-electric equipment and air brakes; Locomotive Electrical Equipment; Locomotive Mechanical Equipment; and Car Inspectors and Carmen.

Railroads and trainees get feedback

Instructors of the Railway Educational Bureau, all active railroad men themselves, grade students' examination papers and make individual comments and suggestions to the students when such help is needed. In the case of formal, company-sponsored programs, the railroad gets a monthly report of each student's progress.

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How to participate

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Railway Educational Bureau

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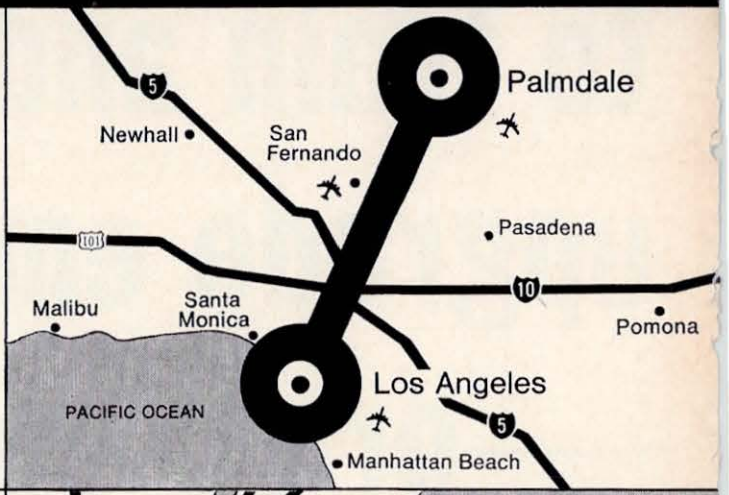

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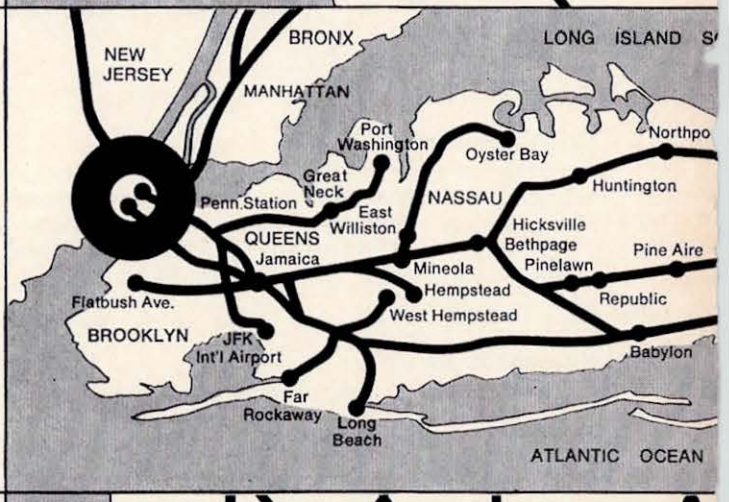
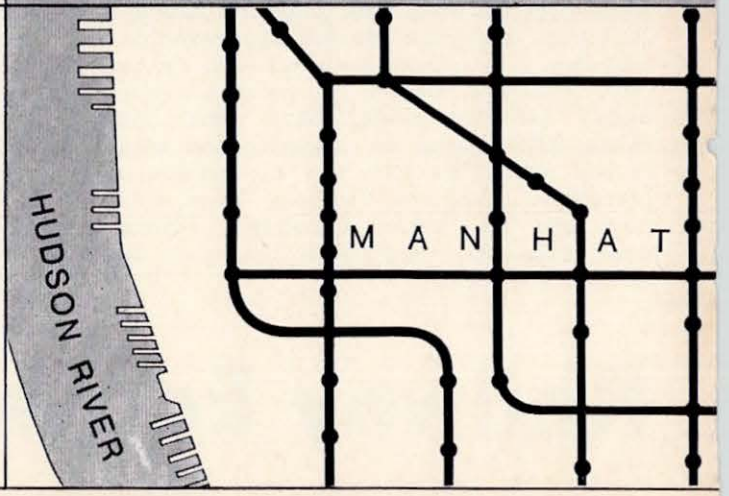


Rapid intra-city, multiple-stop transit.



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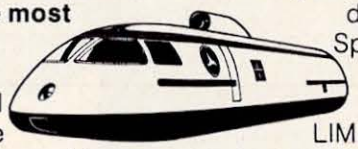

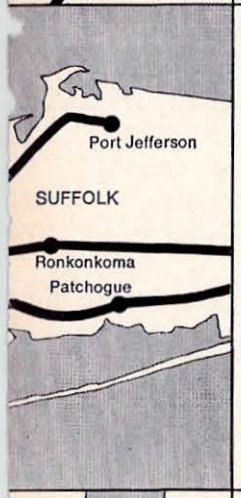

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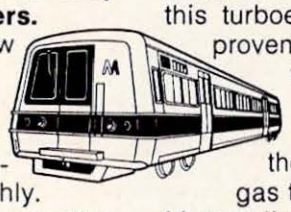
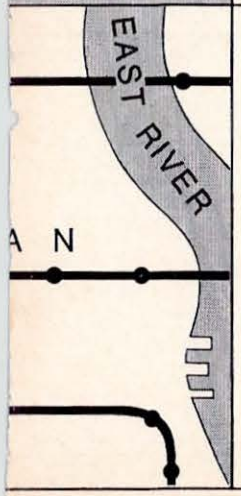


First tests of this dual mode system were in 1969 on the Long Island RR. The heart of this turboelectric system is the service-proven, Garrett 831 gas turbine engine which produces little noise and low emissions. The next step will be prototype evaluation on the Long Island RR with the same gas turbine engines installed in the Metropolitan GT-4 cars.



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GARRETT

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Here's how I'd run

The Trainman

I always hear them talking about higher costs...for power. Replacement parts. Paint jobs. Labor...what have you.

I don't know much about that end of it. But I do say why in the name of common sense don't they *do* something about it? Like changing over to those new lighter-weight stainless steel cars.

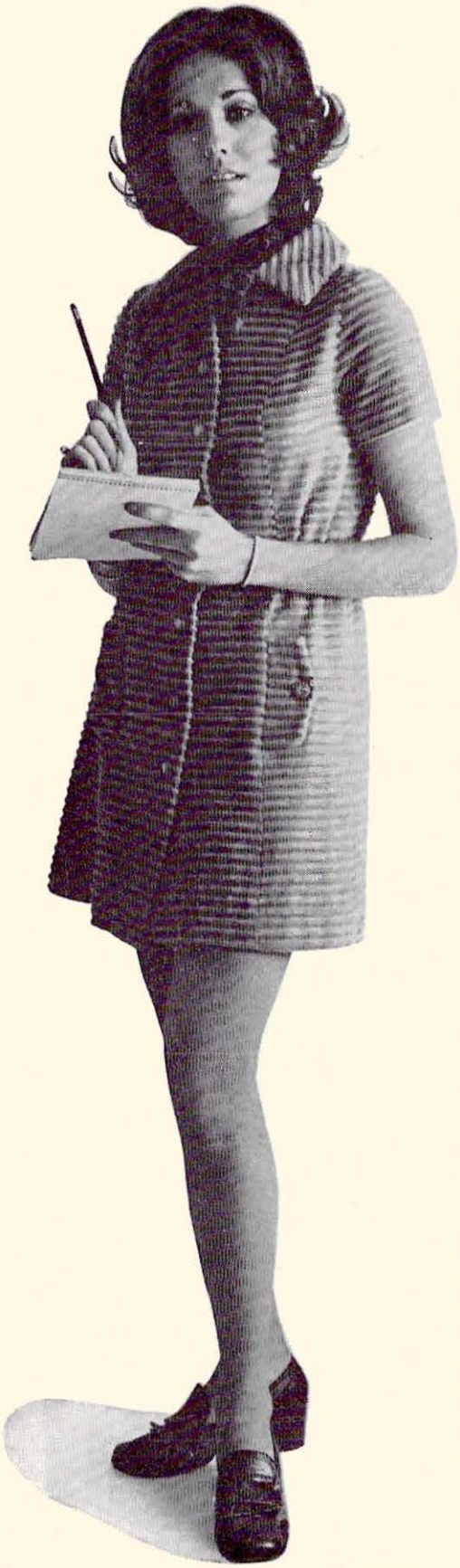
I read where the Long Island Rail Road switched to nickel stainless steel cars. And figured they'd save $2.7 million on *power* over the life of their cars—because they're lighter.

And my buddy who works for MTA said they had 600 new stainless steel subway cars. And since they expect the cars to last 35 years, they figure they'll save $5.6 million on power. Plus an additional $800 on each car on maintenance and paint.

I tell you if I were running this railroad...

...hm-m-m, maybe I *should* be running this railroad.

this railroad...



The Commuting Secretary

I'd throw away all the dirty old cars. And get pretty new ones. Like those stainless steel cars on the Philadelphia-Lindenwold Line.

I use that train five days a week and let me tell you something, it's terrific.

I live in Lindenwold and work in Philadelphia. Driving in used to be a 45-minute bore. A real headache.

Now the same trip takes only *22 minutes* by train. And I should add it's a real pleasure. Thousands of other commuters apparently feel the same way I do and have started taking the train every day instead of driving in.

Those beautiful stainless steel trains are so clean and comfortable. And besides, they're automated! I wonder when the rest of the country will catch up with Philadelphia.

...If only *I* ran this railroad.

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Circle 13 on coupon page 47

Watching Washington

REID BEDDOW

TAX CREDIT FOR TRACK?

Railroads got a big break from the Senate Finance Committee Oct. 28 when it specified that track improvements are eligible for investment tax credits. The Committee wrote in this provision as it approved the 7% tax credit already voted by the House, rejecting the Administration's proposed 10% rate for one year, 7% thereafter, by a vote of 9 to 7. If the track provision becomes law—and chances are excellent that it will survive a full Senate vote and a House-Senate conference—rails will receive a tax credit of about $10 million a year plus about $100 million from retroactive credits on track improvements made during prior years when the tax-credit law was in effect.

Background: When the investment tax credit was originally enacted into law in 1962, it was the intent of Congress that track improvements, as well as rolling-stock acquisitions, be covered. But the Internal Revenue Service would not allow it.

When the new tax credit was proposed in the House last month, it was proposed that a specific provision be written into the bill providing for the application of the tax credit to track improvements. Upon the insistence of the Treasury Department, Rep. Wilbur Mills (D.-Ark.), chairman of the House Ways and Means Committee, deleted this provision.

Reportedly, Mills made the deletion with the understanding that Treasury on its own would see that track improvements would be allowed by the IRS. However, subsequent to House passage of the bill, there were indications that Treasury would *not* honor this commitment.

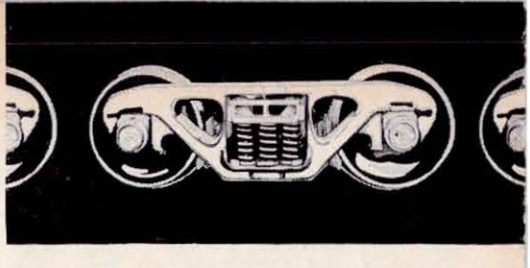
So the specific provision including track expenditures has now been written into the Senate bill—with strong indications that it will be agreeable to both houses of Congress. What the Senate is doing is telling IRS that it has been the "intent of Congress" all along that track should be included.

BIAGGINI TO WASHINGTON, PRO TEM

President Nixon on Oct. 22 named Southern Pacific President Benjamin F. Biaggini as one of the 15 members of the critically important Pay Board, which, with the 7-member Price Commission, will lay down wage and price controls for the so-called Phase II of Mr. Nixon's new economic program. SP's chief, an old friend and backer of President Nixon, will spend at least two months in Washington, probably more.

The Pay Board's immediate and thorny problem is to decide whether deferred wage increases will be allowed after Nov. 14. If not, or if subsequent increases are, in labor's eyes, too parsimonious, the Board's labor members—AFL-CIO's George Meany, USW's I. W. Abel, UAW's Leonard Woodcock, the Machinists' Floyd Smith, and the Teamsters' Frank Fitzsimmons—could walk out. That is what the union members of the Korean War-era Wage Stabilization Board did. The WSB, which also brought in labor, business and public members, was formed Sept. 9, 1951, by President Truman. It collapsed in February 1952 when the labor members left.

Circle 14 on coupon page 47 ►



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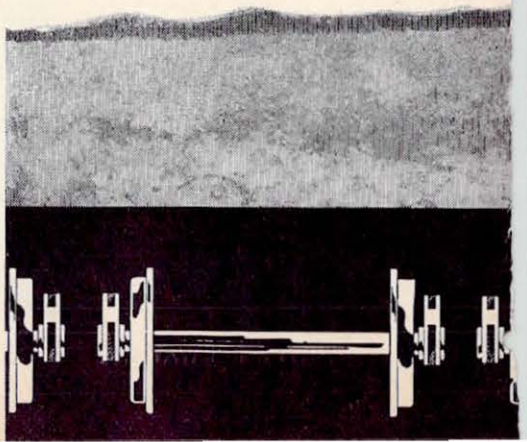
We're not experts in every phase of railroad safety— but as the industry's pioneer designer and producer of electronic hot box detection systems, we can claim a high level of successful experience in working on the problems of bearing failures, axle burn-offs and derailments associated with undetected hot boxes.

Since 1957, more than 1,600 SERVOSAFE Hot Box Detective Systems have been put into service by 54 of the world's major railroads, and have compiled an unequaled record of safety improvement, more efficient preventive maintenance procedures and cost reduction.

Hot box detectors available from Servo offer the widest flexibility in choice of system configuration, features and functional options, including: rail-mounted or ballast-mounted scanner; a complete selection of ancillary and test equipment; solid-state electronic signal processing. Several modes of data read-out are also available— automatic digital read-out at trackside or remote location; pen-paper recorder chart for visual interpretation; FM carrier data transmission over unlimited distances.

With our broad range of products and world-traveling network of field engineers, we can readily "customize" the design, manufacture, installation and operation of a SERVOSAFE system to best meet the particular requirements of your railway.

You are invited to contact us for complete descriptive literature, or to arrange a field engineering site survey and application review— without obligation, of course.



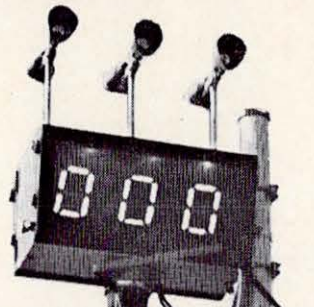
Hot box hide-n-seek. A dangerous game.

Hot box hide-n-seek is an old game — as old as railroading itself. And the villain in the game is the overheated journal that you can't find until it's too late — that's when it worsens into a really dangerous axle burn-off and costly derailment!

The safe way to beat the hot box at its own game is with a SERVOLARM® Model 8000 Trackside Hot Box Visual Display System. Designed to operate with any SERVOSAFE® Hot Box Detective™ System, the SERVOLARM visually signals the presence of a hot journal box and also pinpoints its location. SERVOLARM helps to eliminate train stops and crew delays. It simplifies and speeds up the entire hot box location procedure by directly notifying the crew via a trackside bi-directional display board — a digital readout shows the axle count location of the hot box. If there are no hot boxes, the display board reads "000."

SERVOLARM can be quickly and easily installed with a minimum of construction equipment and labor, while eliminating long distance wiring and extensive communication equipment costs.

If you're looking for an easier and safer way to win the game of hot box hide-n-seek most of the time, take a look at SERVOLARM.



Train crew on the Cincinnati-Atlanta line of the Louisville & Nashville Railroad gets the "OK" signal from a SERVOLARM Trackside Hot Box Visual Display.

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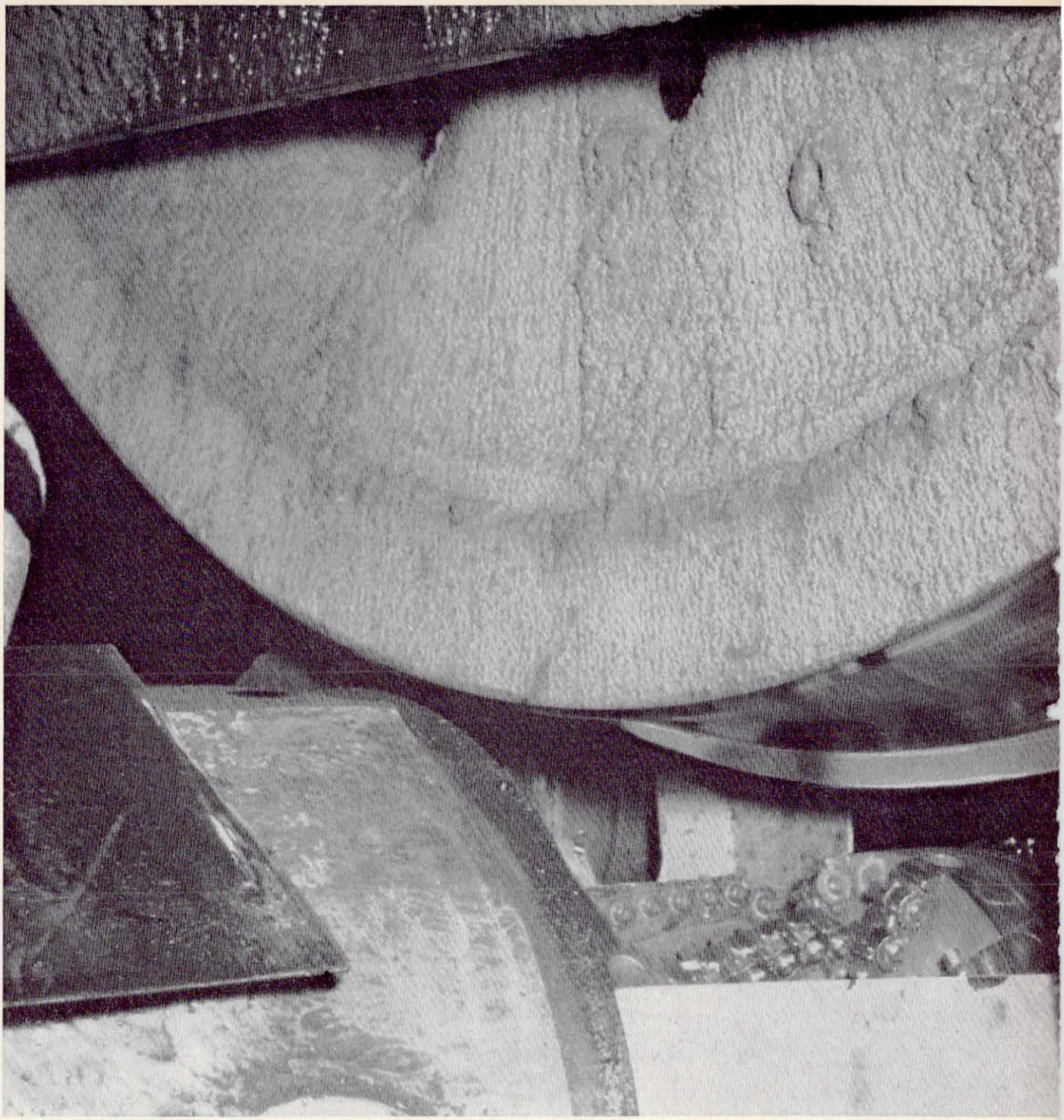
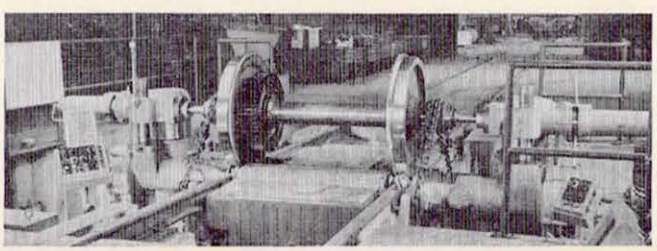


Continue to shape 'em up



How many times can you re-shape your rolling stock's wheels? Two or three times before they're shipped to the scrap pile?

Standard's Wheel Truing Machine can give you about 40% longer operating life from each wheel. Since it's a milling machine, it doesn't have to cut as deep as a lathe to true a wheel. So, each wheel can be re-shaped four or five times. That has to save you big bucks in the cost of re-purchasing and inventory.

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Saves you big dough in down time and labor, too. Because wheels can be trued quickly right on the car, as well as in single units.

How much of your rolling stock can a Standard Wheel Truing Machine handle? All of it . . . locomotives, box cars, flat cars, gondolas, mining cars, commuter cars and rapid transit cars. If it rolls on rails, Standard can help you keep it rolling for less.

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Circle 15 on coupon page 47

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cars to win unconditional approval from the Association of American Railroads.

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Circle 16 on coupon page 47

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New Products Report

Track analyzer (RA-1)

The Gulton dynamic track analyzer EMSE275 is an electronic system for installation in a railroad car to measure and analyze track conditions during selected normal runs. Indicated and recorded data cover track misalignment, cross-level errors, predicted car-body roll at critical speeds, actual speeds and distances.

The track analyzer consists of rate gyroscopes to give measurements; solid-state analog and digital computers and a data processor to analyze this information; also a printer to record data, using 18-column format paper at rates up to 10 lines a second. The data processor, control panel and printer are in a cabinet mounted in the body of the car. The gyroscopes are totally enclosed in a small steel case rigidly bolted to a right-hand journal box on the rear truck.

For proper functioning, the analyzer is installed in a conventional car of at least 100 tons rail weight, having double-opposed, roller-bearing trucks and operated as the last car in a train at speeds to 85 mph. Electric power required is 110-volt, 60 HZ, ac, and amounts to less than 350 watts.

Printed cross-level and alignment errors are given in inches and direction; predicted body roll angle in degrees; vertical acceleration in g's; and odometer reading in hundredths of a mile. A coded letter indicates the range of track defects.

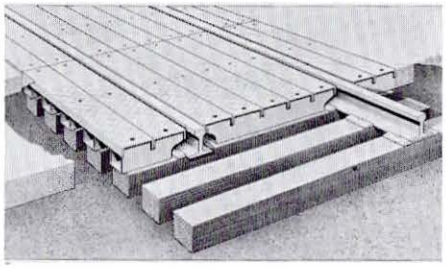
At the end of each statute mile, or upon command, the printed record shows: odometer reading in miles; speed in mph; total minimum defects per mile; total sub-critical defects per mile; and a letter indicating the print command. *Gulton Industries, Inc.*

Highway crossing (RA-2)

A modular steel-unit railroad highway grade crossing, called Steelplank, has been introduced. First offered on an experimental basis four years ago, Steelplank is said to have been greatly improved as the result of field tests under actual operating conditions in a wide variety of public and industrial applications in climates ranging from southern California to New England.

Two standard Steelplank sections accommodate a single lane of highway traffic across one line of track; for two lanes, four sections are required. Each section, 6½ feet long, consists of an inner panel 50½ inches wide for the space between the tracks and two outer panels, 20 inches wide, for the tie-end space between the rail and pavement edge.

Both the inner and outer panels are composed of U-shaped upper and lower members easily welded together. The five load-bearing lower members rest on the rail ties, to which they are anchored by lag screws; the upper members—of



which there are five to the lower panel, two to an outer panel—comprise the traffic deck.

Steelplank sections are custom-fabricated to conform to rail height, thus eliminating need for shims.

Die-formed from quarter-inch S.A.E. 1020 carbon steel for maximum strength and resiliency, Steelplank is available in either of two skidproof surfaces—a standard cold-rolled diamond tread or a coarse abrasive silicate embedded in long-lasting baked epoxy coating. Other features of the improved Steelplank include a four-inch barrier strip added to the other panels to permit close paving and a tapered 45-degree flange for end units, which protects the crossing against items dragged by locomotives or rail cars.

It is said that Steelplank requires no special roadbed preparation, is compatible with any highway surface, can be quickly installed by regular maintenance personnel using regular equipment, and may be readily lifted and replaced to

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permit periodic inspection and renewal of ties and ballast. It is also said that Steelplank sections can be conveniently moved from one location to another as required, or stored for use as needed at temporary crossings. *Steelplank Corp.*

Incinerating toilet (RA-3)

Incinolet Model S/A, an all-electric incinerating toilet, is designed for the diesel locomotive. It provides minimum servicing and maintenance and maximum sanitation—without holding tank, chemicals or honey wagon. The stainless steel, heavy-duty model incinerates all waste to an ash. There are no moving parts in the flushing or venting. A small amount of brake air pressure through an air ejector insures constant venting.

Model S/A's toilet bowl is self-sanitized by heat; an improved catalytic odor reducer removes odor from the combustion effluent before venting. The only service requirements are to empty the heavy-gauge, stainless steel ashpan and to drain an easily accessible air filter.

No recharging with water and chemicals is required, and there is no need for additional support equipment, such as sewer lines or collection wagons. Model S/A satisfies anti-pollution requirements as set by Federal regulations. *Research Products Manufacturing Co.*

Improving security (RA-4)

A Magnetic Visual Control System has been developed to save time and increase the efficiency of all security personnel. One of New York City's leading banks uses the system to schedule and control each security post within its headquarters and all its branches. The posts are typed onto Flexcards and inserted into magnetic card holders. The holders are placed under the proper location. Under each post is placed a magnetic dymo name tag of the guard assigned to the post. As changes occur, it takes only seconds to move the magnetic elements from one location to another. Different-color or different-size cards can denote personnel and post categories. The system is neat, clear and concise—and the organization chart is always up to date. *Methods Research Corp.*

Alarm system (RA-5)

The Quind-Alarm system is a remote monitoring system initially developed for supervising alarms at unattended microwave repeater stations. Printed circuits are treated with conformal coating to permit operation under adverse environmental conditions. In its simplest form it can be used to monitor up to 40 points at as many as 27 remote stations over a frequency bandwidth of 300-3,000 Hz.

The specific cause of the alarm may be identified by switching the common alarm decoding equipment to the address of the station signaling trouble. *Quindar Electronics Inc.*

Deviation meter (RA-6)

The S-1323A portable solid-state deviation meter provides direct reading measurements for servicing two-way radio and other communications equipment. It is complete and self-contained with built-in local oscillator; no other accessories are required.

The S-1323A contains an accurate, linear, counter-type discriminator and a heavily degenerative peak-to-peak voltmeter. A highly stable conversion oscillator provides accurate measurement to 1000 MHz with low inherent residual frequency modulation and maximum freedom from drift. An integrated circuit audio amplifier drives a speaker built into the front cover of the unit permitting off-the-air monitoring. *Motorola Communications & Electronics, Inc.*

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For full information, call your nearest Alco office. Or write Alco Engines Division, White Industrial Power, Inc., Auburn, New York 13021.

ALCO

Alco locomotives are still in good hands.

Subsidiary of White Motor Corporation.

Center plates pass

grinding 17-month test.

No major wear spots or galling showed up on plate maintained with Shell Center Plate Lubricant (see right). Railroads are saving thousands of man-hours and dollars with this unique product.

When the center plate on the right was photographed, it had just completed 17 months on the job for a major road. It was cleaned with an air blower; swabbed with solvent. Look at it! Smooth. No galling. Only minor evidence of wear.

After 17 months of horseshoe bends and S curves; after 68 weeks of rocking and swiveling under loads up to 110 tons, this is really something! Yet, it's typical. We spot-checked the plates of many of the thousands of cars maintained with Shell Center Plate Lubricant and the story was basically the same—effective, long-run lubrication.

Material Savings—Improved Operations

Effective, reliable lubrication is only one of the reasons why so many roads are switching to this Shell product. Material costs are significantly lower because you don't use as much of the Shell lubricant as you do grease or loose pellets. But the greatest saving is keeping expensive, revenue-producing equipment operational. Think about that.

When a center plate is balky, the wheel flanges tend to climb the rail when rounding a curve. In extreme cases, this can cause derailing. Shell Center Plate Lubricant helps protect against this hazard and keep trucks moving freely. This, in turn, reduces wear on the wheel flanges and rail sides. Result: wheels and rails last longer.

You really ought to think about these discs for center plate lubrication. They're clean. Easy to apply, even in freezing weather. Car men are sure to use them because they're so much simpler to apply and accurate to measure than grease or loose pellets. One man can service 20 to 30 cars from a single pail of Shell discs. The cumulative savings in time and manpower could be important for you.

Only seconds are needed to position Shell discs. No mess, no guessing about the proper amount to apply. One man carrying a 15-lb. pail of about 240 Shell discs can lubricate 20-30 cars quickly.

◀ Keeping expensive, revenue-producing equipment operational is a major reason why more center plates are being lubricated with unique Shell Center Plate discs. They help keep trucks moving freely, help reduce wear on wheel flanges and rail sides.

After 17 months' service, there are no major wear spots or galling on this 100 ton coal car center plate lubricated with Shell Center Plate Lubricant. Note how the dark gray component of the lubricant has made a tightly-adhering coating on the metal. Note also how clean the flange has remained for 17 months.

Partner in Savings—Shell TORNUS® Oil

TORNUS Oil is another Shell product that is helping keep maintenance costs low on the EMD and GE locomotives of many roads today. This high-performance oil keeps soot and carbon particles in suspension, keeps engines clean and working efficiently. TORNUS was employed over 660 million miles ago by 18 leading roads, and has helped over 2,000 EMD diesels run smoothly.

Your Shell Representative is the man to see.

He can tell you about Shell Center Plate Lubricant and TORNUS Oil in detail—how they are used, how they can help cut costs for you. Call him today. Stamford, Ct., (203) 327-3600; Baltimore, Md., (301) 821-5905; Chicago, Ill., (312) 341-3275; New Orleans, La., (504) 521-2684; Menlo Park, Calif., (415) 325-0721. Shell Commercial Marketing, One Shell Plaza, Houston, Texas 77002.

Shell Tornus® Oil
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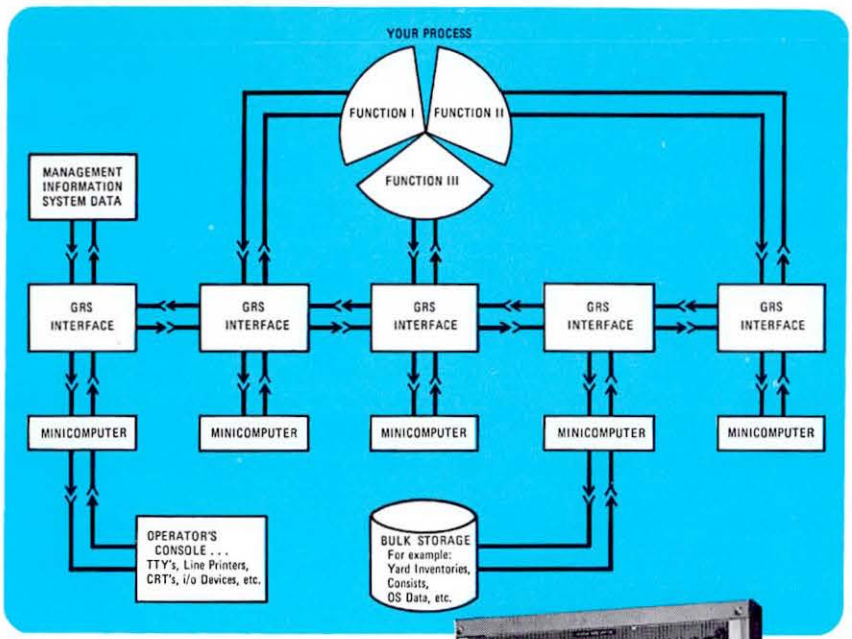
DISTRIBUTED COMPUTER SYSTEM

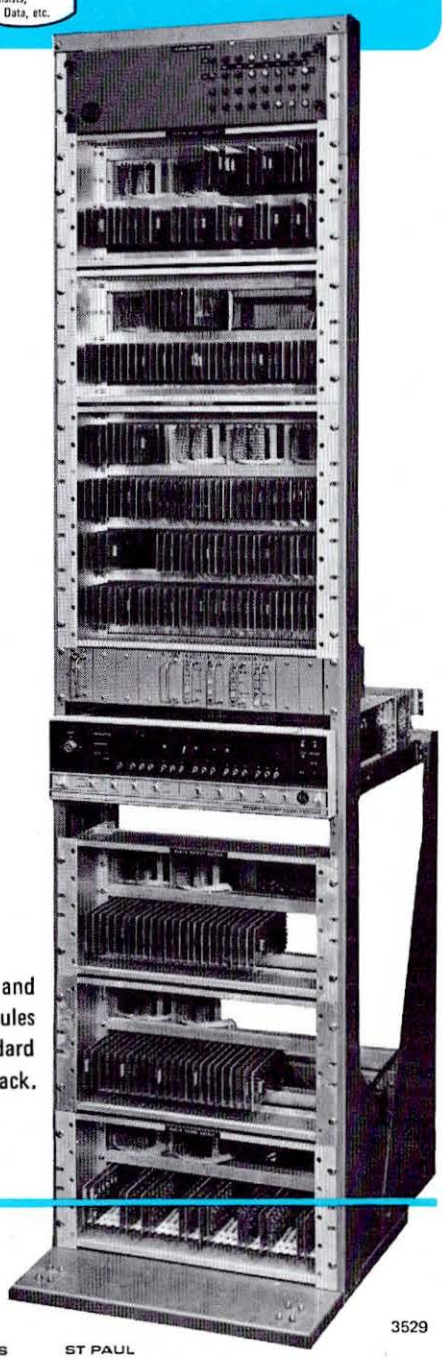


Based on the minicomputer, this advanced technology is ideally suited to modern centralized traffic control, car classification yards and terminals, and interlocking consolidation.

In a large facility, several minicomputers, with their associated interfaces, may be distributed to perform various functions with optimum efficiency. System availability is not tied to a single computer, as in the older, monolithic computer systems.

DCS features

Tailored computer technology
Building block type engineering and hardware
System exactly matches needs
Expansion easily achieved — minimum initial cost
Unique modular system
Low spare parts inventory
Reliability of solid-state component systems
Semi-independence of individual control subsystems
High system availablity
Inexpensive, interchangeable subsystems
Plug-coupled modules
Minimum downtime (diagnostic program aids)



Minicomputer and interface modules fit on standard 19-inch rack.

For more information, ask for GRS Development D21.0200

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Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended Oct. 23 totaled 445,506 cars, according to the Association of American Railroads. This was a decrease of 6,080 cars, or 1.3%, compared with the previous week, and a decrease of 111,336 cars, or 20.0%, compared with the corresponding week last year. The decrease from last year was attributed largely to continued strikes by coal miners. Ton-miles generated by carloadings in the week ended Oct. 23 are estimated at 13.4 billion, a decrease of 15.6% below the corresponding week of 1970.

REVENUE FREIGHT CARLOADINGS

Commodity	Oct. 23 week	Oct. 16 week
Grain	31,118	31,746
Farm products	19,142	20,132
Metallic ores	32,525	34,414
Coal	23,882	28,484
Crushed stone, gravel & sand	29,628	31,230
Nonmetallic minerals	9,402	9,117
Grain mill products	18,894	19,133
Food & kindred products	24,949	23,989
Primary forest products	24,663	25,222
Lumber & wood products (except furniture)	15,742	15,771
Pulp, paper & allied products	23,203	23,200
Chemicals & allied products	26,694	26,200
Petroleum products	9,171	9,225
Stone, clay & glass products	20,127	20,439
Coke	6,017	5,986
Metals & products	18,731	17,843
Motor vehicles & equipment	24,705	24,507
Waste & scrap materials	13,956	13,531
Forwarder & shipper assn. traffic	6,694	6,786
All other carloads	65,671	63,778
LCL traffic	592	493
Total cars loaded	445,506	451,226

CUMULATIVE TOTAL, 43 weeks	1971	1970	1969
	21,200,081	22,658,286	23,365,643
Estimated revenue ton-miles (billions) 43 weeks	614.9	635.4	634.1

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended Oct. 16 totaled 23,495 cars (8.0% below the corresponding week last year) and 39,724 trailers or containers (down 3.3% from 1970). Cumulative volume for the first 42 weeks of 1971 is 958,316 cars (off 6.5% from last year) and 1,567,977 trailers or containers (down 5.2% from 1970). In addition to freight, 2,714 cars carrying 4,234 trailers or containers of mail and express traffic were handled piggyback. Cumulative figures for the first 42 weeks of 1971 are 126,401 cars (down 14.6% from the 1970 total) and 191,534 trailers or containers (down 15.0% from 1970).

IN CANADA

7-days ending	Revenue Cars Loaded	Cumulative Totals
Oct. 14, 1971	75,475	3,063,722
Oct. 14, 1970	77,115	3,033,347

FREIGHT-TRAIN CARS

● *CP Rail.*—Ordered 100 63-ft piggyback flat cars and 150 100-ton, 81-ft container flat cars from Marine Industries, Ltd., at an approximate cost of $5 million.

● *Cotton Belt.*—Ordered 500 Center Flow covered hopper cars from ACF at a cost of about $9 million. Fifty cars will be equipped with round hatches for sugar service, 450 cars will have elongated hatches for general service.

● *Southern Pacific.*—Ordered 500 62-ft, 70-ton bulkhead flat cars from ACF at a cost of about $8 million.

● *Orders and deliveries.*—Orders were placed for 1,534 new freight cars in September, compared with 1,211 in August and 1,934 in September 1970. New cars on order and undelivered on Oct. 1 totaled 23,113, compared with 26,429 on Sept. 1 and 21,636 on Oct. 1, 1970.

FREIGHT TRAIN CARS ORDERED AND DELIVERED AND BACKLOG OF ORDERS

DELIVERED

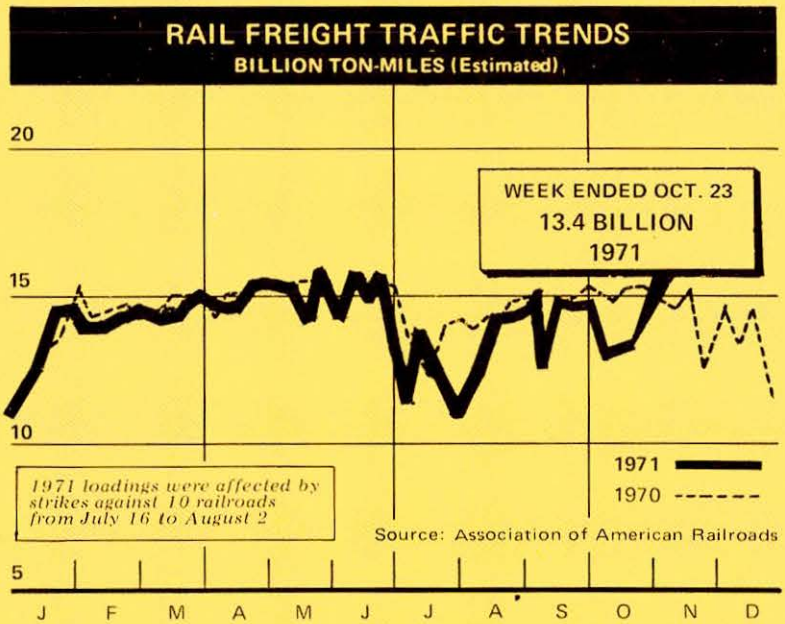
	Sept. 1971	Aug. 1971	Sept. 1970
Built new by car builders	4,144	2,852	4,922
Built new in R. R. shops	557	477	1,225
Built new—Total	4,701	3,329	6,147
Rebuilt	710	287	924
TOTAL DELIVERED	**5,411**	**3,616**	**7,071**

ORDERED

To be built new by car builders	1,534	1,211	1,587
To be built new in R. R. shops	0	0	347
To be built new—total	1,534	1,211	1,934
To be rebuilt	380	275	216
TOTAL ORDERED	**1,914**	**1,486**	**2,150**

ON ORDER AND UNDELIVERED

	Oct. 1, 1971	Sept. 1, 1971	Oct. 1, 1970
To be built new by car builders	19,880	22,639	17,585
To be built new in R. R. shops	3,233	3,790	4,051
To be built new—total	23,113	26,429	21,636
To be rebuilt	2,001	2,331	4,415
TOTAL ON ORDER	**25,114**	**28,760**	**26,051**



MOVING PEOPLE

Baltimore applies for Federal funds to build a rail-transit system

The Urban Mass Transportation Administration has received its first formal application for a massive Federal grant to help pay for construction of a new rail-transit system. The application, described as "preliminary," was presented to UMTA Administrator Carlos C. Villarreal on Oct. 26 by Harry R. Hughes, Secretary of the Maryland Department of Transportation, and Walter J. Addison, Mass Transit Administrator. Maryland is seeking Federal assistance amounting to $437,334,000—two-thirds of the estimated $656-million cost of Phase I of the proposed Baltimore Region Rapid Transit System. Phase I will include two corridors totaling 28 miles between the Northwestern suburb of Owings Mills to downtown Baltimore, and then to the southern suburb of Marley. The Maryland legislature will be asked in 1972 to provide local funding. Hughes said the preliminary application for Federal funds had been made at this time to allow UMTA ample time to evaluate technical aspects of the proposal.

Sen. Allott speaks out for rails vs buses

Senator Gordon Allott (R-Col.) rose on the floor of the Senate Oct. 20 to state publicly what many have been saying privately— that "The Department of Transportation is under great pressure to adopt a national policy, either directly or indirectly, which would favor the highway mode over rail systems or new technology." Allott charged that "some who are interested in promotion of highways and who of late have encountered an adverse reaction to the placement of highways in urban areas, see an opportunity to force local communities to accept more highways if they can pressure the DOT into formulating a policy whereby buses running on exclusive bus lanes would be the prime means of urban transportation for which Federal funds would be made available." Allott, a member of the Transportation Appropriations Subcommittee, warned that he will not support transit funding if cities are subjected to pro-highway "coercion."

Does Amtrak really care about its trains? Senator Hartke wonders

Amtrak, which runs out of cash to cover operating expenses this month, seemed indifferent to its future at an Oct. 26 hearing requesting new Federal funding for the intercity rail passenger carrier. It loyally endorsed a $170-million subsidy proposed by DOT Under Secretary James M. Beggs, who asserted that the future of intercity rail travel is in doubt and that Amtrak should be operated on an experimental basis. The new aid, the bare minimum needed to cover losses, is designed to last Amtrak until July 1, 1973. Amtrak's seeming "I-don't-care" attitude incurred the wrath of Senate Surface Transportation Subcommittee Chairman Vance Hartke (D.-Ind.), who accused Amtrak of operating a "holding action," until it could discontinue all but its Northeast Corridor trains. Senator Hartke proposed instead a $420-million subsidy, $150 million of it for new equipment. He told reporters later that he would see that any future quasi-governmental transportation corporation would have management more responsive to Congress.

DOT grants:

To the Southeastern Pennsylvania Transportation Authority and the New Jersey Department of Transportation, supplemental grants totaling nearly $20 million to help purchase 214 new high-speed electric rail cars.

People in the News

AMTRAK.—Robert S. Medvecky, former general attorney Southern New England Telephone Co., named vice president–general counsel and secretary for the **National Railroad Passenger Corp.** (AMTRAK), Washington, D.C.

BURLINGTON NORTHERN.—C. H. Dunn named director of signal engineering in the engineering division, St. Paul, succeeding **A. L. Essman,** retired. **D. H. Thomsen** appointed assistant director of signal engineering, St. Paul. **William G. Pearson,** project engineer, succeeds Mr. Thomsen as regional signal engineer, Chicago.

In the BN intermodal sales division of the marketing department, **C. J. Paul** named general sales manager-freight forwarder/consolidator; **D. A. Eastland,** manager-intermodal services; **C. L. Kath,** general sales manager-tofc/cofc; **K. P. Wager,** general sales manager-international trade; Pacific Coast ports; **N. D. Brehm,** general sales manager-international trade, Canada and Great Lakes ports; **C. E. Mott,** manager-intermodal planning; **J. H. Hutchinson,** manager-intermodal research. All will have headquarters in St. Paul.

CHICAGO & NORTH WESTERN.—Orville J. Gartrell, manager of labor relations (operating), named director of labor relations (operating), to succeed **H. R. Beisel,** retired. Mr. Gartrelli's successor is **Murray Humphrey,** assistant manager of labor relations (operating), who in turn is succeeded by **Eric O. Baker,** district supervisor-labor relations, Milwaukee.

DELAWARE & HUDSON.—C. H. McOmber, assistant comptroller, Albany, N.Y., retired Sept. 1, after more than 47 years of service.

DULUTH, WINNIPEG & PACIFIC.—H. C. Lear, assistant manager, promoted to manager, with headquarters as before at Virginia, Minn.

GRAND TRUNK WESTERN.—Walter H. Cramer, Jr. appointed vice president of marketing, Detroit. Mr. Cramer was formerly assistant vice president of traffic, **St. Louis-San Francisco,** St. Louis.

NEW YORK & LONG BRANCH.—Charles H. Allen elected vice president and general manager, Newark, N.J., succeeding **Joseph R. Walsh,** now vice president–employee relations, **Jersey Central** (RA, Sept. 13, p. 101). Mr. Allen is general manager–operations and maintenance, **Jersey Central,** having recently been promoted from chief engineer.

SANTA FE.—W. H. Lawson named trainmaster (AMTRAK), Coast Lines, Los Angeles.

Robert S. Medvecky
Amtrak

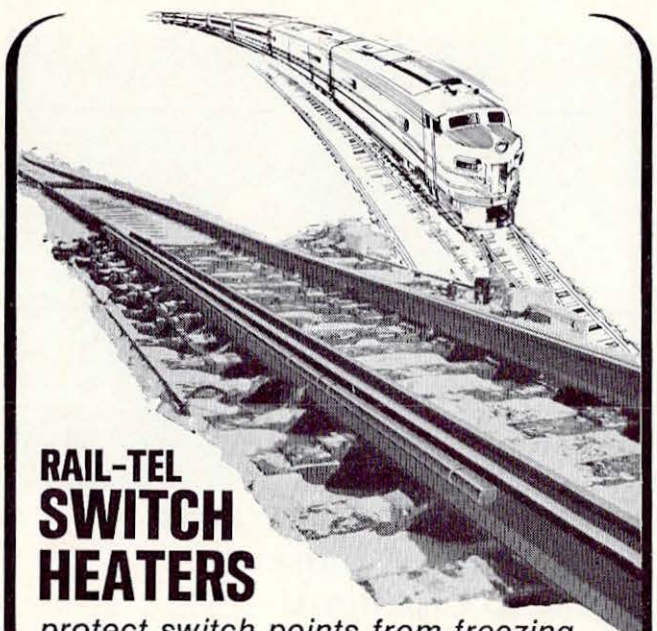
Michael A. Gaffney
Keystone

SUPPLY TRADE

Michael A. Gaffney elected president, Railway Equipment Division, **Keystone Railway Equipment Co.,** Camp Hill, Pa. Mr. Gaffney was formerly president, Rockford Bolt & Steel Division.

R. H. Townsend has been named manager of engineering, **Transportation Systems Division, Vapor Corp. J. Samuel Keller** has been appointed manager of car systems engineering in charge of Car Systems Section. Mr. Townsend was formerly product manager, door and temperature control systems, and Mr. Keller was product manager for relays and electronic systems.

Atlantic Eastern Sales Corp., Coraopolis, Pa., has been franchised as a "kit distributor" by the **Parker Seal Co.,** Parker Hanni-



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Marathon LeTourneau Co., Equipment Division, Longview, Tex., has implemented a national sales and service program to bring better service to the railroads' TOFC-COFC customers. **Mi-Jack Products, Inc.,** Chicago, has been selected as the representative to U.S. railroads.

ACI Systems Corp. moved into new and larger executive and service headquarters at 520 Armory Drive, South Holland (Chicago), Ill., 60473, on Oct. 1.

Henderson E. Six has been named marketing manager, Industrial Group, **Westinghouse Electric Corp.,** Pittsburgh, succeeding **John E. Goetz,** elected vice president, Pacific region, San Francisco. Mr. Six was formerly manager, general industries systems department, Industrial Systems Division, Buffalo.

J. A. Hampel has been appointed manager, quality control for the manufacturing department of **Pullman-Standard Division** of **Pullman Incorporated.** Mr. Hampel, formerly manager of works at Pullman-Standard's Michigan City, Ind., plant, which closed last October, will have headquarters at the Hammond, Ind., pant.

Leonard Heinlein, sales manager-railroad products, **Prime Manufacturing Corp.,** Oak Creek, Wis., has been appointed general sales manager in charge of all sales. **Timothy J. Galvin,** vice president of builder sales, has resigned to become sales representative for Prime's representative in St. Louis, **Ross Railway and Industrial Supply Co.**

Timothy J. Galvin has joined **Ross Railway and Industrial Supply Co.,** St. Louis, as sales representative. He was formerly vice president of builder sales, **Prime Manufacturing Corp.,** Oak Creek, Wis.

Robert B. Whalen, former field engineer—signals, **Boston & Maine,** named head of the new signal section, **Thomas K. Dyer, Inc.,** consulting engineers of Lexington, Mass.

John E. Styles has been named manager—transportation and transmission projects, **Gibbs & Hill, Inc.,** New York.

Richard T. Pullen, operations manager, industrial plastics division, **Westinghouse Electric Corp.,** West Mifflin, Pa., has been named president, and general manager **KW Battery Co.,** Westinghouse subsidiary at Skokie, Ill. Mr. Pullen replaces **W. B. Loewenherz,** retired.

The replacement parts activities of **Baldwin-Lima-Hamilton,** formerly part of the Industrial Equipment Division of BLH have been formed into a new company, **Baldwin-Hamilton Co.,** which will function as one of three divisions of **Ecolaire, Inc.** Management of the new division will be the same as that of the Replacement parts Department of BLH, but the new company will have no further association with BLH. **Henry Rentschler** is president of Baldwin-Hamilton Co. at new headquarters in Wilmington Industrial Park, Wilmington, Del. 19899.

Victor A. Viggiano has been named president and chief executive officer at Ramsey, N.J., of the **Okonite Co.,** a separate company formed by **Omega-Alpha, Inc.,** of Dallas, Tex., from the former Wire & Cable Division of the Okonite Co. Mr. Viggiano had been president and general manager of the Wire & Cable Division since it was established in 1968.

William A. Nystrom has been promoted to chief engineer, Carbon Division, **Stackpole Carbon Co.,** St. Marys, Pa. He was formerly supervisor-anode testing and development.

OBITUARY

Royce G. Kershaw, chairman of the board, **Kershaw Manufacturing Co.,** and president and board chairman, **Royce Kershaw Co.,** died Oct. 17. He would have been 73 on Nov. 2.

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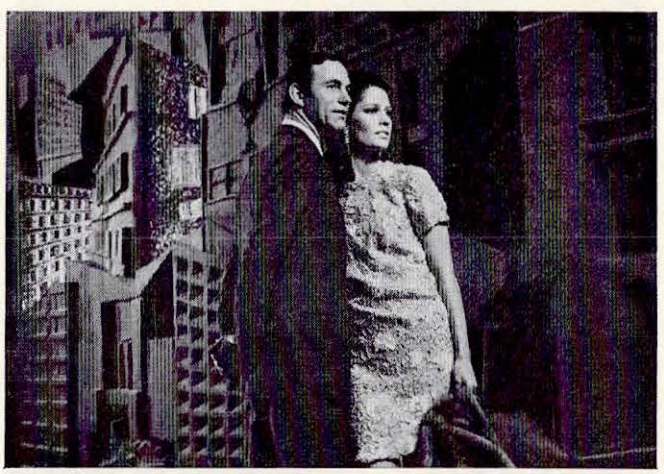

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Viewpoint

New York: A revolt against highways

Theodore Kheel, the labor mediator and mass transit advocate who vigorously fought New York's proposed new $2.5-billion transportation bond issue, described the defeat of the proposal Nov. 2 as a "repudiation of the highway trust fund."

There is no doubt that highway building was the major casualty of the revolt of New York's voters. Mass transit also suffered. But possibly not very much, in the view of many voters. On paper, mass transit was to receive slightly more than half of the proceeds from the new bonds. But New Yorkers have had paper promises before. In 1967, they approved a similar $2.5-billion bond issue. About half of that was to have gone for mass transit. But, as the Wall Street Journal reported a few days before last week's election, "the sad truth is that while the entire $1.25 billion already has been raised for highways through the sale of bonds and short-term notes, a paltry $247 million has been generated for public transit, including money for aviation. . . . A major portion of the 1967 bond allocation for mass transit still hasn't been utilized."

So, rightly or wrongly, many New York voters viewed the inclusion of mass transit in the new appeal as a come-on for more highway money. Urged by Governor Rockefeller and Mayor Lindsay to vote for the new bond issue, a large number of citizens took a damned-if-we-do, damned-if-we-don't attitude—and didn't.

In its pre-election-day article, the Wall Street Journal got to the heart of the matter:

"Four years ago, and again this year, a key argument for approval of the referendum was the Federal matching funds that the bonds would attract. But the size and workings of the Federal Highway Trust Fund insure that Federal money for highways will be much more easy to attract than Federal funds for transit.

"This is because revenue accumulated from the various highway user taxes, currently about $5 billion a year, is doled out through Congressional appropriation for highway and roadbuilding projects. This tail-wagging-dog approach is perpetuated by an active highway lobby, developed over the years, that has much more influence in Washington than any counterpart lobby on behalf of mass transit. According to New York State officials, highway appropriations attracted some $1.04 billion in Federal aid grants under the 1967 bond issue. Mass transit appropriations amounted to $132.4 million."

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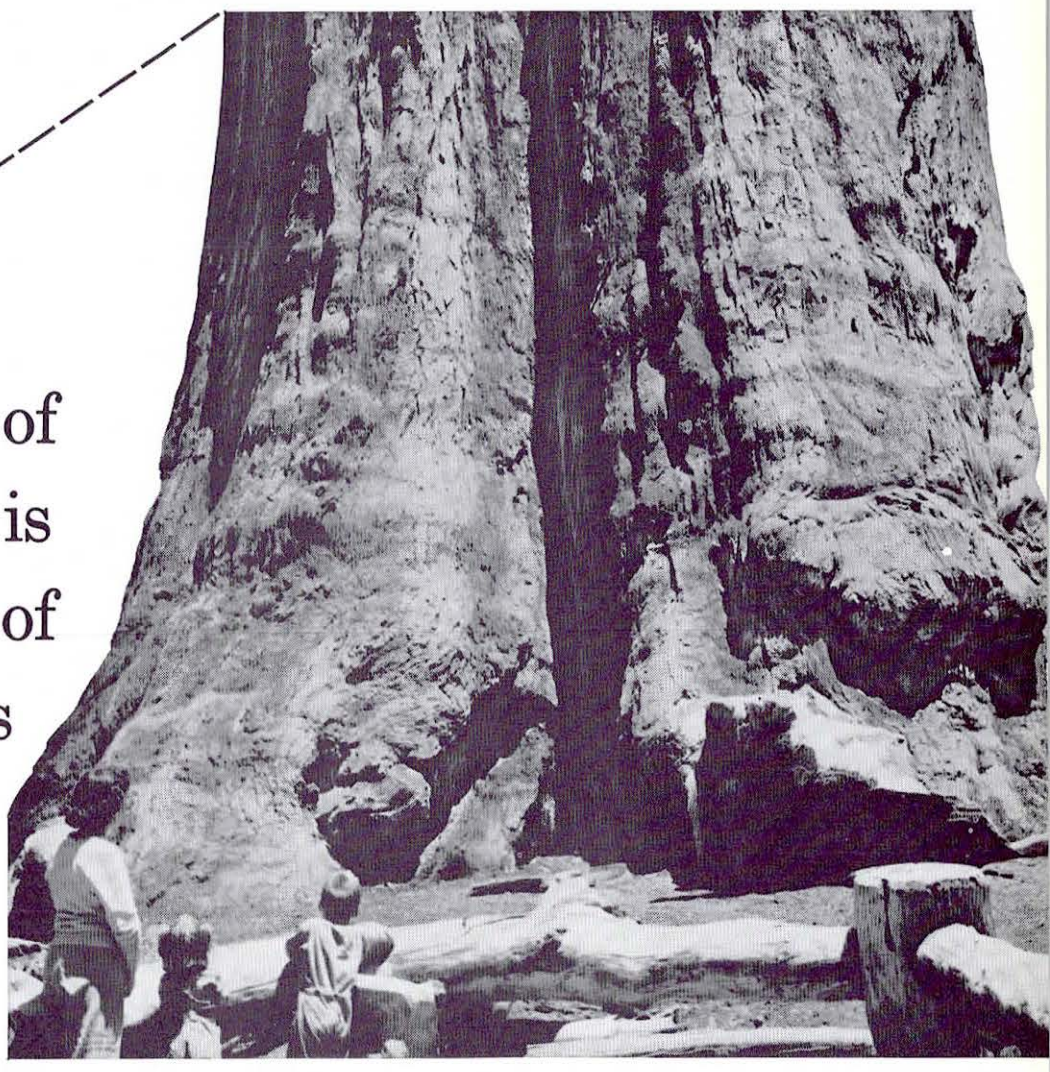

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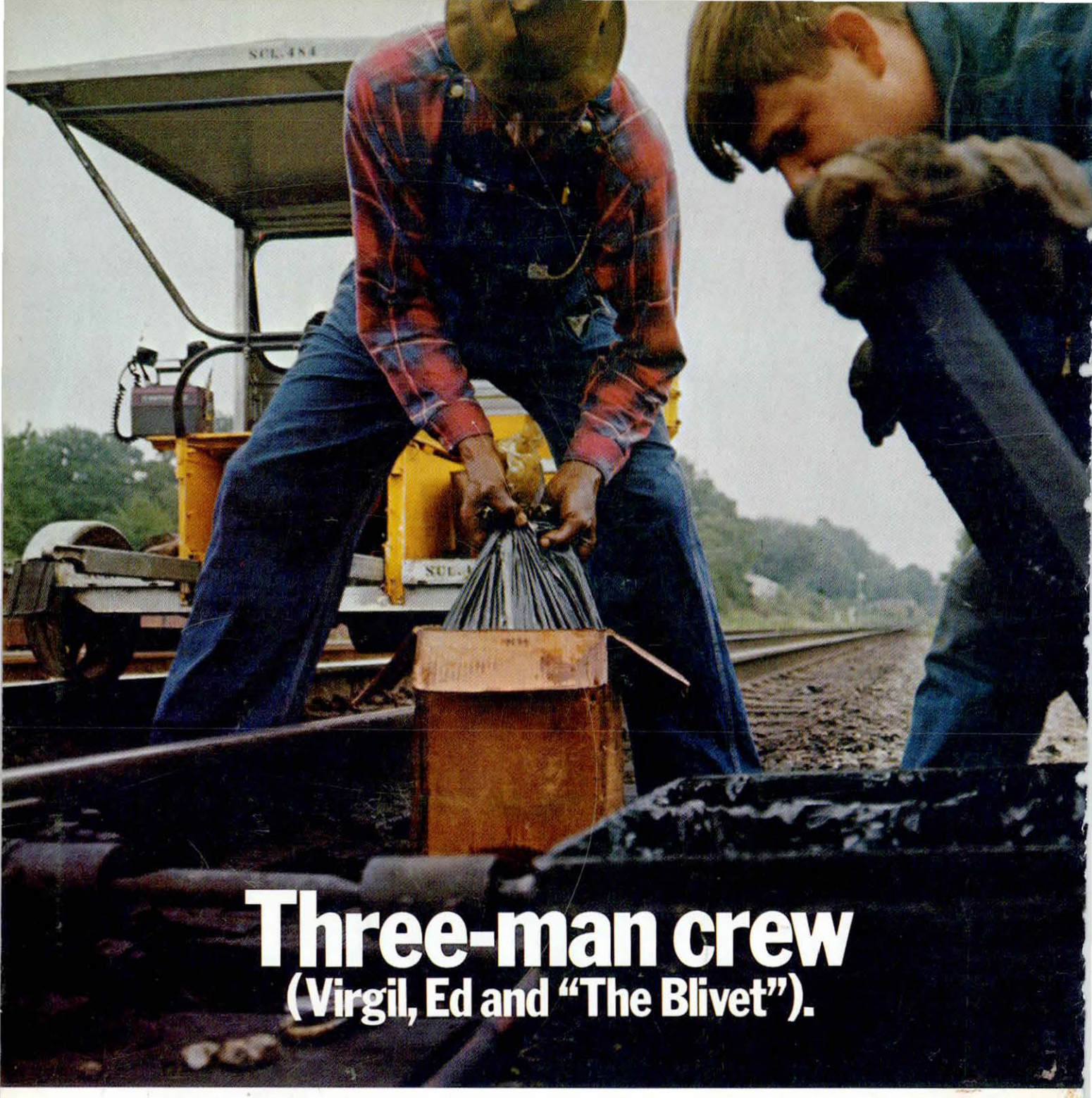

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